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ABSTRACT

These learning modules are designed to provide health care workers involved with medications with basic information about the nature and administration of medications. The 30 modules are organized into six units. An overview of preparation and administration of medicines, principles of medication therapy, and medication fundamentals are presented in unit 1. The second unit covers interpreting medication orders, charting medications, and legal and ethical obligations of medication administration. Health, age, and body process; care of the aged; and handling medications are discussed in unit 3. Selected medications for the major body systems are the subject of the eight modules constituting the fourth unit. Unit 5 contains four modules devoted to medications for such special problems as inflammation, infection, and immunity; nutritional deficiencies; allergies; malignant deseases; and mental and emotional stress. The final unit covers the following techniques involved in the administration of medication: preparation and administration of oral medications; count schedules to establish accuracy of supply; application of topical medication; instilling ear, eye, and nasal medication; and inserting rectal or vaginal suppositories. Master tests for the 30 modules are also provided. (MN)

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Indiana Health Occupations Education

STUDENT MODULES FOR ADMINISTRATION OF MEDICATIONS FOR UNLICENSED NURSING PERSONNEL

Revised Edition

developed under contract
with

Indiana State Board of Vocational and Technical Education

CE 029 010

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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EDUCATION

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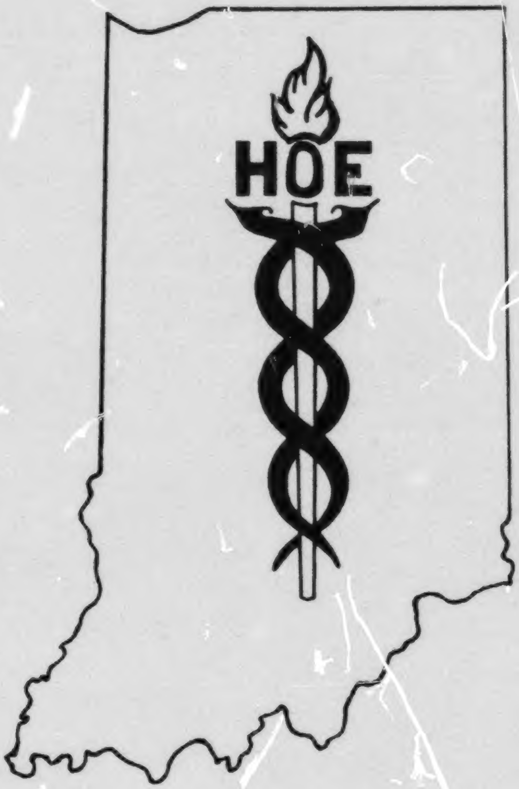

MODULE

# A - 9 - 1

OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER
KATHY COX, ASSISTANT WRITER

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FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

GOAL

Doctors, pharmacists, nurses and other specified health care workers are all members of a team responsible for seeing that patients receive proper medications safely. It is necessary for those persons giving (administering) medications to fully understand their responsibilities while preparing, administering and recording medications and their actions (effects).

In addition to patient responsibilities, persons working with medications must also be aware of the need for all medications to be standard in dosage (strength) and quality (purity); otherwise medications are not reliable. Methods of measuring strengths and purity have been developed and are enforced by federal regulations to protect the public from unsafe medications.

This module will provide health care workers associated with medications, basic information about their responsibilities, standard regulations in regard to medications and the methods by which they will study future lessons pertaining to medications.

TURN TO NEXT PAGE

OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on page 5 to make certain you are ready for this module.

2. Read through the objective on page 6 so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities on page 7. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO PAGE 5

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OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study:

1. Legal Responsibilities for the Health Worker
2. Organizations of Health Care Agencies

****

If you have completed these areas of study

GO ON TO PAGE 6

If you have _not_ completed these areas of study

SEE YOUR TEACHER

OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

Your objective for this area of study is as follows:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will

1. List the five objectives of this medication course.
2. Identify the method(s) by which you will progress through this medication course.
3. Recognize your responsibilities in relation to medications (before, during and after administration).
4. Identify those publications which set forth medication standards in the United States.
5. State the major reason for standardizing medications.
6. Recognize the steps by which a medication is standardized.
7. Identify the purpose of each of six medication laws.

FOR STUDENT ACTIVITIES GO TO PAGE 7

STUDENT ACTIVITIES

INSTRUCTIONS

All students required to do the following:

TEXT:

From Skelley's text, Medications and Mathematics For The Nurse, read pages 55-57 and pages 62-67. All students are expected to make notations on their reading.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Overview of Preparation and Administration of Medications." Be sure to note those points emphasized in the lecture outline which can be found on pages 8-11 of this module. The taking of notes during the lecture is expected of all students.

TERMINOLOGY:

Study the terms related to the overview of medications found on page 12. Be able to define each term in your own words.

CLASS EXERCISE:

During the class time, examine copies of the official medication listings and other reference sources. Attempt to find at least one medication that can be found in two of the listings and compare the findings in each for the given medication. See page 13.

CHECKLIST:

Complete the checklist on page 14.

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture on "Overview of Preparation and Administration of Medications," be sure to note the following:

A. Medication Aide Curriculum

1. Objectives of the course will be to provide the unlicensed individual with an entry level competence in:
    - a. the general source, origin, forms, methods of administration and handling of current medications
    - b. effects and side-effects, both favorable and unfavorable, of selected common medications
    - c. specified, manipulative skills in medication administration
    - d. recording of medication administration and observable effects, both favorable and unfavorable
    - e. assuming identified position on the health care team
2. Methods of Course Management
    - a. teacher - lecture, demonstration, helper, problem-solver, evaluator, record keeper
    - b. learning modules
        - (1) 30 total, 2 types - areas of study and manual tasks
        - (2) parts of a learning module
            - (a) goal - purpose or reason
            - (b) objective - end product
            - (c) activities - text, lecture, discussions, etc.
            - (d) master test - test for objective

GO ON TO PAGE 9

LECTURE OUTLINE

ACTIVITIES

A. 2. Methods of Management - Cont'd.
    - c. student participation
        - (1) learning module
        - (2) activities (as assigned)
        - (3) records (when possible)
        - (4) monitors/helpers (class and lab)
        - (5) testing

B. Responsibilities Regarding Medications
    1. Doctor
    2. Pharmacist
    3. Registered nurse, licensed practical nurse, other specified persons
        - a. responsibilities before administration of medications
            - (1) interpretation (following) of medication order
            - (2) preparation of medication for administration
            - (3) proper equipment and technique
        - b. responsibilities during the administration of medications
            - (1) identification of the patient
            - (2) preparation of the patient
            - (3) administration of the medication
        - c. responsibilities following administration of medications:
            - (1) recording
            - (2) after-care of equipment
            - (3) observing the patient for effects of medication
            - (4) recording and reporting effects of medication

GO ON TO PAGE 10

13

LECTURE OUTLINE

C. Standardization of Medications

1. Reasons for Standardization of Medication
    a. guaranteed potency or strength of medication
    b. guaranteed purity of medication
2. Assay/Bio-Assay - technique by which strength and purity of medication is measured
3. The Standardization Procedure (After Assay/Bio-Assav)
    a. animal testing
    b. human testing
    c. application to F.D.A.
    d. release of medication for general use
4. Major Publication which list Official Medications
    a. United States Pharmacopeia and National Formulary
5. Other Resources
    a. Facts and Comparisons
    b. Physician's Desk Reference (published thru cooperation of drug manufacturers)

D. Medication Legislation (Laws)

1. The Federal Food, Drug and Cosmetic Act-prohibits inter-state movement of adulterated and misbranded food, drugs, devices and cosmetics
    a. Durham-Humphrey Amendement of 1951 - specifies which drugs must be dispensed by prescription
    b. Kefauver-Harris Amendement of 1962 - required that a new drug must be safe and effective for its intended use

14

LECTURE OUTLINE

ACTIVITIES

D. 1. Cont.

c. Harris Bill-Drug Abuse Control Amendment of 1965 - strengthens control over depressants and stimultants

2. The Social Security Amendments of 1965 - contain items related to health care

3. The Controlled Substance Act of 1970 - controls handling of opium, cocaine, and other harmful substances

4. Public Law #92-223 of 1974 - (for Medicaid providers requires non-licensed personnel who administer medications to complete a State-approved course

FOR TERMINOLOGY GO TO PAGE 12

OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

TERMINOLOGY

ACTIVITIES	Study each term carefully. Be able to define each term in your own words.
Act (Legal)	a written law; exact words drafted and approved by a national, state of local legislature
Amendment	the alteration or correction of a law, bill or act
Bill	a formal, written statement. filed in court; draft of proposed law
Competent	having adequate knowledge and abilities to perform at level of average; to be qualified
Law	man-made rule which regulates human conduct in an ordered and binding manner
Learning Goal	purpose or reason for learning about a given area of study or manual task
Learning Module	method of receiving student assignements and organizing activities so as to reach objective
Learning Objective	end product for a given area of study or manual task; if reached, student will be competent in that area
Manual Task	a specific assignment (usually on the job) that involves physical effort and use of one or more parts of the body - frequently the hands
Master Test	a test, written or performance, that if completed successfully indicates that the learner has "mastered" the area of study or manual task
Medication	any substance used in the treatment of disease or relief of pain

FOR CLASS EXERCISE GO TO PAGE 13
FOR CHECKLIST GO TO PAGE 14

OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

CLASS EXERCISE

ACTIVITIES

At the time designated by the teacher during the class period, examine copies of.

(1) Physician's Desk Reference
(2) Facts and Comparisons
(3) Any other materials provided by your teacher

Look at the information provided about the medications listed. Look for information about:

(1) drug action
(2) methods of administration
(3) drug reactions

FOR CHECKLIST GO TO PAGE 14

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Lecture		
Terminology		
Class Exercise		

Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

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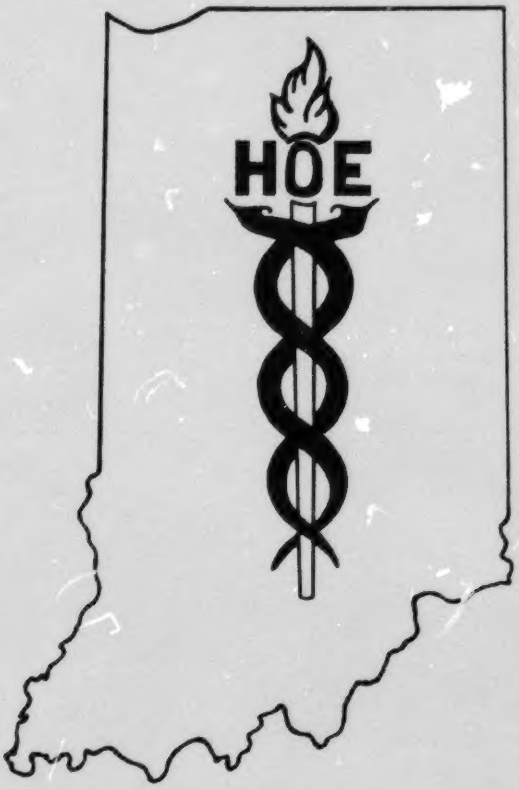

MODULE

# A - 9 - 2

PRINCIPLES OF MEDICATION THERAPY

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER
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FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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PRINCIPLES OF MEDICATION THERAPY

GOAL

For many patients, medications are an essential part of their care. Safe administration of medications requires that the health worker know the uses of medications, the changes that happen in the body when medication is administered (actions) and the observations that can be made from medication actions within the patient's body (effects).

Although the medications person needs to have knowledge of the major actions of medications within the human body, their most important responsibilities will be to administer the medications and observe for the effects of medications. Medications may produce the desired effect, which is the reason the doctor would order any medication. However, undesirable effects may occur from medications administered. The medications person must understand that each person is an individual and may have different effects from the same medications. Effects may vary for many reasons including body size, state of health, age, etc.

This module will provide that health care worker, who is involved in administering medications, with information concerning the general uses of medication, the major actions of medications and the most common effects of medications, favorable and unfavorable.

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on page 19 to make certain you are ready to proceed.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

PRINCIPLES OF MEDICATION THERAPY

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study:

1. Basic Patient Observation Techniques
2. Module #A-9-1
   "Overview of Preparation and Administration of Medications"
3. All pre-requisites listed for module #A-9-1

* *

If you have completed these areas of study

GO TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

PRINCIPLES OF MEDICATION THERAPY

Your objective for this area of study will be as follows:

OBJECTIVE

Given a written examination in 30 minutes or less, and with at least 75% accuracy, you will be able to:

1. Identify six general uses of medications and one example of each
2. Select the five main actions of all medications when in the human body
3. Recall the difference between local and systemic action of medications
4. Recognize the major events that occur to medications with systemic action
5. Label the major effects of medications with correct term(s)

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

LECTURE:

At the time designated by the teacher, attend the lecture on "Principles of Medication Therapy." You may follow the outline for the lecture on pages 22-24. The taking of notes during the lecture is expected of all students.

WORK SHEET:

Complete the "Work Sheet For Principles of Medication Therapy" which follows.

PUZZLE:

Complete the "Cross Wits Puzzle for Medication Uses and Systemic Events."

LABEL:

Label the "Effects of Medications" found in this module.

STUDY:

Study the lecture outline carefully so that you are able to meet the five areas listed in the objective.

CHECK LIST:

Complete the check list at the end of this module.

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture on "Principles of Medication Therapy," be sure to note the following:

A. Medication Uses
  1. Definition - the reason "why" a doctor orders a given medication
  2. Six basic uses of medication
    a. maintain health - examples: vitamins and insulin
    b. treat process of disease - examples: antibiotics and digitalis
    c. relieve symptoms - examples: aspirin, aminophyllin
    d. prevent disease - examples: vaccines, toxoids
    e. alter body processes - examples: hormones, contraceptives
    f. diagnose disease - examples: barium, clinitest tablets

B. Medication Actions
  1. Definition - the way in which medications do their job in the human body
  2. Five major actions of medications
    a. stimulate body cells - examples: adrenalin, dexedrine
    b. slow down body cells - examples: seconal, codeine
    c. kill or weaken invading organisms - examples: iodine, penicillin
    d. replace lacking substances - examples: iron, calcium
    e. irritate body cells - examples: castor oil, Dulcolax

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ACTIVITIES

B. Cont.
   3. Location of Actions
      a. local action - medications may act at the site of administration, on the skin or mucous membrane
      b. systemic action - action occurs after medication is carried by the bloodstream to body cells which are capable of responding to medication

C. Systemic Action Events
   1. Definition - the things that happen to medication in the human body
   2. Chain of Events
      a. reception - medication introduced into body by whatever method of administration
      b. absorption - medication moves from site of administration to bloodstream
      c. distribution - medication transported by bloodstream to where it will act
      d. metabolism - medication used by body cells, converted into inactive substance
      e. excretion - elimination of drug occurs by proper channel - mainly kidneys; could be feces, sweat, exhaled air, etc.

D. Effects of Medication
   1. Definition - the things that happen to the body as a result of medication; can be observed
   2. Types of effects of a single medication
      a. addictive effect - demanded; patient must have; same as habituation
      b. allergic effect or hypersensitivity - an unusual, undesirable reaction

ACTIVITIES

D. 2. Cont.

- c. cumulative effect - medication collects in body due to slow excretion; may cause toxic effect.
- d. (drug) dependency - physical or emotional dependence; patient relies on it.
- e. (drug) idiosyncrasy - unusual or unexpected effect from a medication.
- f. primary or desired effect - reason the medication was ordered.
- g. secondary or side effect - additional effect to the primary effect; may be desirable or undesirable.
- h. (drug) tolerance - decreased response to a medication which has been taken regularly.
- i. toxic effect - poisonous effect - could be harmful; could cause death.

3. Types of effects when two or more medications are taken by the same person.
   - a. antagonistic effect - the action of one medication interferes with the action of another.
   - b. (drug) interaction - effects of one medication are changed by the action of another
   - c. toxic effect - effects of medications given together are poisonous to the body.

WORK SHEET
FOR
PRINCIPLES OF MEDICATION THERAPY

ACTIVITIES

From your lecture notes, answer the following questions:

1. Briefly define what is meant by the "uses of medications:"

2. Briefly define what is meant by the "actions of medications:"

3. What is the difference between "local" and "systemic" action of medications?

4. Briefly define what is meant by the "effects of medications:"

GO ON TO NEXT PAGE

WORK SHEET
FOR
PRINCIPLES OF MEDICATION THERAPY

ACTIVITIES

5. List the five major actions of medications once inside the human body and give an example of each:

	ACTION	EXAMPLE
a.	____________________	____________________
b.	____________________	____________________
c.	____________________	____________________
d.	____________________	____________________
e.	____________________	____________________

* *

Check your answers on page _____

FOR CROSSWITS GO TO PAGE 27

FOR REVIEW GO TO PAGE 29

FOR CHECK LIST GO TO PAGE 31

CROSS WITS
FOR
MEDICATION USES & SYSTEMIC EVENTS

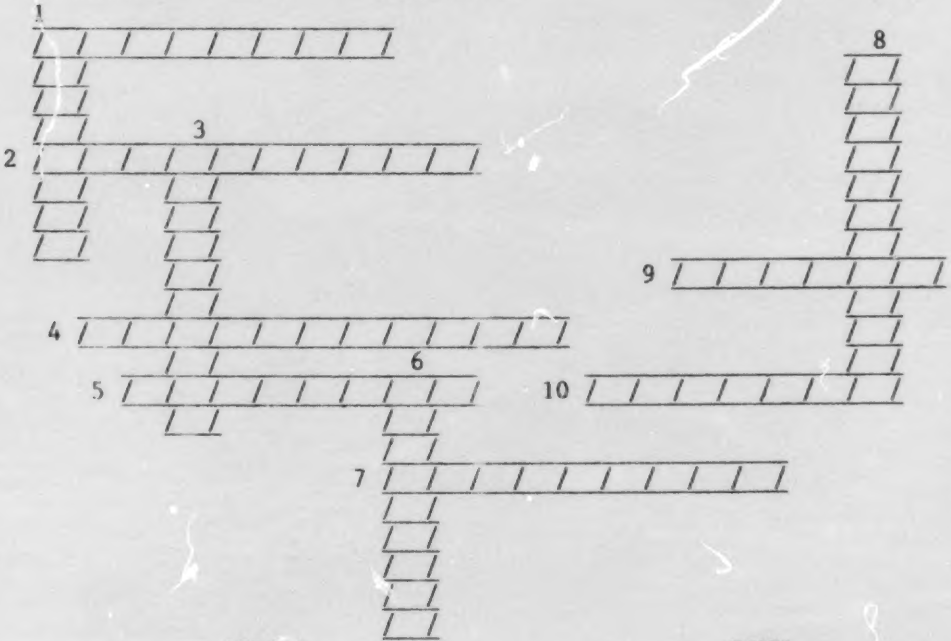
ACTIVITIES

From the words below, fill in the Cross Wits Puzzle using the definitions at the bottom of the page.

Absorption
Antibiotics
Aspirin
Barium

Distribution
Excretion
Hormones
Metabolism

Reception
Vaccines
Vitamins



ACROSS

1. Prevents disease
2. Uses needed medication; converts what's left
4. Treats disease process
7. Way medication received into body
9. Helps diagnose disease
10. Relieves symptoms

DOWN

1. Maintains health
3. Medication taken to bloodstream
6. Eliminates from the body
8. Taken by bloodstream to proper place

CHECK YOUR ANSWERS ON PAGE 30

EFFECTS OF ANY SINGLE MEDICATION

1. Cumulative Effect.	1. Slow excretion - causes medicines to accumulate in body.
2. Drug Idiosyncrasy.	2. Very unusual or unexpected effect of medicine.
3. Drug Tolerance.	3. Decreased response to medicine.
4. Primary Effect.	4. Desired effect.
5. Drug Dependency.	5. In need of - patient relies on it.
6. Allergic Effect Drug Hypersensitive.	6. Reaction - patient sensitive.
7. Toxic Effect.	7. Poisonous effect - could be harmful to point of death.
8. Secondary Effect.	8. Additional effect besides desired one.
9. Addictive Effect Drug Habituation.	9. Must have - demanded.

EFFECTS OF TWO OR MORE MEDICATIONS

1. Antagonistic Effect.	1. The action of one medication interferes with the action of another
2. Toxic Effect.	2. Combined effects of each medication causes poisonous effect.
3. Drug Interaction.	3. Effect of one medication changed by the action of another

REVIEW OF SYSTEMIC ACTION EVENTS

(The things that happen to medications in the body)

RECEPTION - Medication is introduced into the body

Oral Rectal Inhalation Parenteral Skin	Methods of Administration

ABSORPTION - Medication is transferred into the bloodstream

Stomach and intestines Lungs Cells	Where it happens

DISTRIBUTION - Medication is carried by the blood to body cells

Blood stream	Where it happens

METABOLISM - Medication is used by body cells

Body cells	Where it happens

EXCRETION - Excess medication and waste products are eliminated by the body

Kidneys Intestines Lungs	Where it happens

WORK SHEET

ANSWERS

1. The reason why a doctor orders a medication
2. The way medications work in the body
3. Local - acts at the site, on the skin or mucous membrane;
4. The things that happen to the body as a result of the medication
5. a. stimulate body cells - Adrenalin, Dexedrine
   b. slow down body cells - Seconal, Codeine
   c. kill or weaken organisms - Iodine, Penicillin
   d. replace lacking substances - Iron, Calcium
   e. irritate body cells - Castor Oil, Dulcolax

CROSS WITS

ACROSS

1. Vaccines
2. Metabolism
4. Antibiotics
5. Hormones
7. Reception
9. Barium
10. Aspirin

DOWN

1. Vitamins
3. Absorption
6. Excretion
8. Distribution

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Lecture		
Work Sheet		
Cross Wits Puzzle		
Review		
Study Outline		

Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

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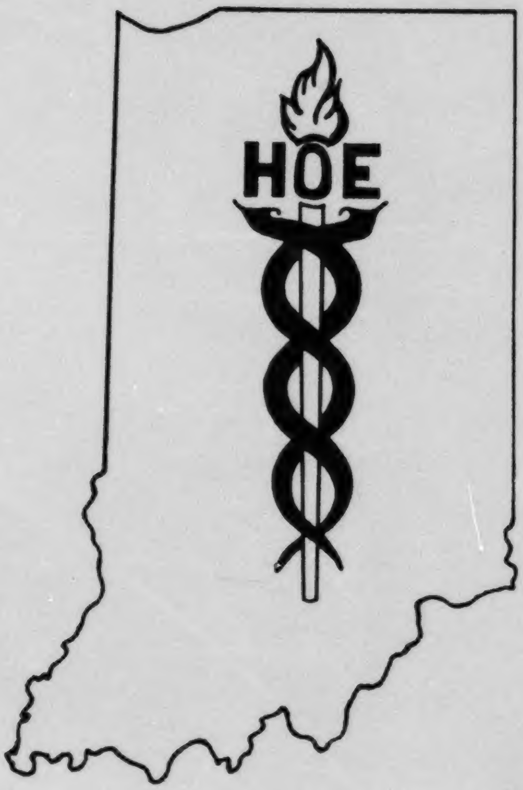

MODULE

# A - 9 - 3

MEDICATION FUDAMENTALS

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GOAL

As a health care worker, you will become very familiar with both the names and appearance of many, many medications. However, you will also be encountering new and different medications frequently. Therefore, it is essential for you to know where information concerning medications may be found. There are also different names for the same medications; knowledge of the different methods of naming medications is important and will help you to use sources of medication information.

Medications not only have different names, they may also come from different sources, be in different forms, for different methods of administration. Because there are so many different medications being given today, medications personnel need to understand the source of medications, be able to recognize all standard medication forms and be aware of the method in which each is administered.

This module will provide the health care worker who administers medications with both information on and visual introduction to medication resource materials and standard medication forms.

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on page 37 to make certain you are ready to begin.

2. Read through the objective on page 38 so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities on page 39. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

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PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study:

1. Module # A-9-1
   "Overview of Preparation and Administration of Medications"
2. Module # A-9-2
   "Principles of Medication Therapy"
3. All pre-requisites listed for Modules # A-9-1 and # A-9-2

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATION FUNDAMENTALS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recognize three sources of drug (medication) information and the type of information contained in each
2. Identify the three methods of naming medications
3. Identify the four sources of medications and give one example of each
4. Identify the forms of selected medications for given categories, both verbally and visually

FOR STUDENT ACTIVITIES GO ON TO NEXT PAGE

MEDICATION FUNDAMENTALS

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's text, Medications and Mathematics For The Nurse, you are to read pages 53-54, and the first paragraph on page 55, plus pages 70-72.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medication Fundamentals." Be sure to pay particular attention to the areas related to the lecture. The taking of notes during the lecture is expected of all students.

WORK SHEET - PART A:

Examine the medication information sources which your teacher will bring to class and fill out Part A of the "Work Sheet" on page 47

WORK SHEET - PART B:

Use the medication resource books and find as many types of medication names as you can for the medications listed in Part B of the "Work Sheet."

CATEGORY STUDY SHEET:

Examine samples of specific medications categories which your teacher will bring to class and list them on the "Medications Category Study Sheet." With the use of your textbook and lecture notes, complete the study sheet on page 48 .

STUDY:

After making sure you have the correct categories and forms for specific medications listed, study the sheet so that you are able to identify the form of each medication listed.

CHECK LIST:

Complete the check list.

MEDICATION FUNDAMENTALS

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture on "Medication Fundamentals," be sure to note the following:

A. Orientation to Pharmacology and Medication Information Sources
  1. Definitions
    a. Medication - also called drug
      (1) comes from Dutch word "droog" - dry
      (2) first drug sources - dried plants
      (3) substance or mixture used for diagnosis and treatment of disease
    b. Pharmacology - the study of drugs and the way the body responds to them
  2. Medication Information Services
    a. official publications (see Module # A - 9 - 1)
    b. other references
      (1) United States Dispensatory - includes botany, chemistry, pharmacy and uses of medications
      (2) Physician's Desk Reference - includes trade and generic names, plus uses
      (3) Drug Evaluations - doctors' association listing of new drugs plus evaluation
      (4) Facts and Comparisons - contains information about all available U.S. drugs

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LECTURE OUTLINE

ACTIVITIES

A. Cont.
  3. Naming Medications
    a. generic name - the official name of a drug - usually related to chemical structure - not patented.
      Example: tetracycline
    b. trade or brand name -
      (1) symbol ® - registered or patented to certain company (official name or generic name is public - cannot be patented)
      (2) name belongs to someone
      (3) Examples: Achromycin, Panmycin (Brand names for tetracycline)
    c. chemical name -
      (1) meaningful only to chemist
      (2) composition of medication
      (3) name in symbols and letters which stand for ingredients

B. Sources and Origins of Medications
  1. Plants - may use leaves, seeds, roots, oils - any part of plant
      Examples: Digitalis, Opium
  2. Animals - practically all hormones from glands
      Examples: Cortisone, Insulin, Thyroid
  3. Minerals and Salts - mining source
      Examples: Iron, Iodine, Magnesium
  4. Chemical - synthetic, man-made
      Examples: Aspirin, Thorazine

GO ON TO NEXT PAGE

ACTIVITIES

C. Medication Forms and Modes of Administration
  1. Forms - all medications in one of four forms
    a. liquid
    b. solid
    c. semi-solid
    d. gas
  2. Modes (Methods) of Administration - six main methods
    a. oral - by mouth
    b. topical - placed on skin or mucous membrane
    c. parenteral - injected by needle
    d. instillation - dropped on mucous membrane or placed in desired area by tube
    e. insertion - placed into specific area of body - usually by fingers
    f. inhalation - breathed into lungs

D. Specific Categories of Medication Forms
  1. Liquids
    a. fluid extracts - medication or substance (vegetable) dissolved in alcohol - very concentrated
       Example: Cascara Sagrada
    b. tincture - extracts diluted in alcohol - vary in strength from 10% - 20%
       Example: Tr. Merthiolate

GO ON TO NEXT PAGE

LECTURE OUTLINE

ACTIVITIES

D. 1. Cont.

c. spirits - preparation of volatile substance (evaparates easily and has distinct odor) dissolved in liquid and alcohol 5% - 20% strength

Examples: Spirit of Peppermint, Spirits of Ammonia

d. syrups - medication made with water, flavoring and sugar

Example: Syrup of Ipecac

e. elixirs - a water-alcohol solution which may contain sugar and pleasant-smelling substances

Example: Terpin Hydrate

f. suspensions - fluid mixtures that seem to stay mixed together for a short time, the ingredients separate later - should be shaken

Example: Mylanta

g. milks - bulky suspensions, in water, medications are insoluble must be shaken

Example: Milk of Magnesia

h. emulsions - suspensions of oils, water and substances

Example: Haley's M. O.

i. liniments - mixtures of medications with soap, oil, water or alcohol - for external application only - to be massaged in and keep skin warm

Example: Icy Hot, Sloan's Liniment

GO ON TO NEXT PAGE

ACTIVITIES

D. 1. Cont.

j. lotions - watery preparations that contain suspended medication. Are to be patted on only (not rubbed or massaged) to soothe and/or moisten skin

Example: Calamine Lotion

k. sprays - medications administered by atomizer - used mostly to treat membrane of nose and throat

Example: Neo-synephrine

l. solution - substance dissolved in water

Example: saline solution

2. Solids

a. pills - medications shaped into very small, round balls, coated to disguise taste (very few true pills)

Example: Alophen pills

b. tablets - dried, powdered medication pressed into shape

(1) compressed - example - Aspirin, Septra

(2) coated - to improve taste - example - Becotin T

(3) enteric coated - to prevent irritation or absorption in the stomach. example - ASA Enseals

(4) timed release - to cause slower absorption, longer lasting effect. example - Dimetapp Extentabs

GO ON TO NEXT PAGE

ACTIVITIES

D. 2. Cont.

- c. capsules - medication in small cylinder-like gelatin containers
    - 1. regular - tasteless, dissolve rapidly
      examples - Dilantin, Achromycin
    - 2. timed release - prolonged (longer lasting) effect one end of capsule clear, one end colored; brand names for timed release capsules - Spansules, Plateau-caps, Sequels, Duracaps
- d. lozenges - also called troches - flat, rounded disc made up of medication and sugar. Dissolves in mouth, used to soothe throat
  examples - Cepacol Lozenges, cough drops

3. Semi-solids

- a. powders - solid medication that has been ground into powder - used in that form - nearly always mixed with water or fluid when taken orally
  examples - oral powder - Metamucil, K-Lor
  topical powder - Tinactin, Terramycin powder
- b. ointments - mixtures of medications with a fatty base - soft enough to spread at room temperature, melt at body temperature when used for the eye must be special - "ophthalmic"
  examples: Zinc Oxide Ointment, Vaseline

GO ON TO NEXT PAGE

ACTIVITIES

D. 3. Cont.

   c. creams - absorb more easily than ointments
      examples: Cold Cream, Zinc Oxide Cream

   d. suppositories - mixtures of medications with a substance such as cocoa butter. Molded to shape of area to be inserted Melt at body temperature.
      example: Dulcolax Suppository, Aspirin Suppository

4. Gases
   oxygen, various anesthetics

FOR WORK SHEET GO TO PAGE 47
FOR CATEGORY STUDY GO TO PAGE 48
FOR CHECK LIST GO TO PAGE 49

WORK SHEET

ACTIVITIES

PART A - MEDICATION NAMES

From the resource books or from your text, find as many of the three major names as possible for the medications listed below. Compare your answers with your classmates.

Medication	Generic Name	Trade Name	Chemical Name
Darvon			
Gantrisin			
Sumycin			
Librium			

PART B - MEDICATION INFORMATION

Examine the PDR or Facts and Comparisons for information about the following drugs.

Drug	Action	Adverse reactions
Cyclospasmol		
Coumadin		

FOR CATEGORY STUDY GO TO PAGE 48
FOR CHECK LIST GO TO PAGE 49

MEDICATIONS CATEGORY STUDY SHEET

ACTIVITIES

As you examine the medications your teacher has brought to the classroom, list them on the sheet below. After you have listed them, with the use of your textbook and lecture notes, complete the category and forms columns below.

Check your answers with the teacher.

MEDICATION	CATEGORY	FORM	MEDICATION	CATEGORY	FORM
1.			11.		
2.			12.		
3.			13.		
4.			14.		
5.			15.		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

FOR CHECK LIST GO TO PAGE 49

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date it.

ACTIVITY	CHECK	DATE
Reference Reading		
Lecture		
Work Sheet Part A		
Part B		
Category Study		

Instructor's Signature ___________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

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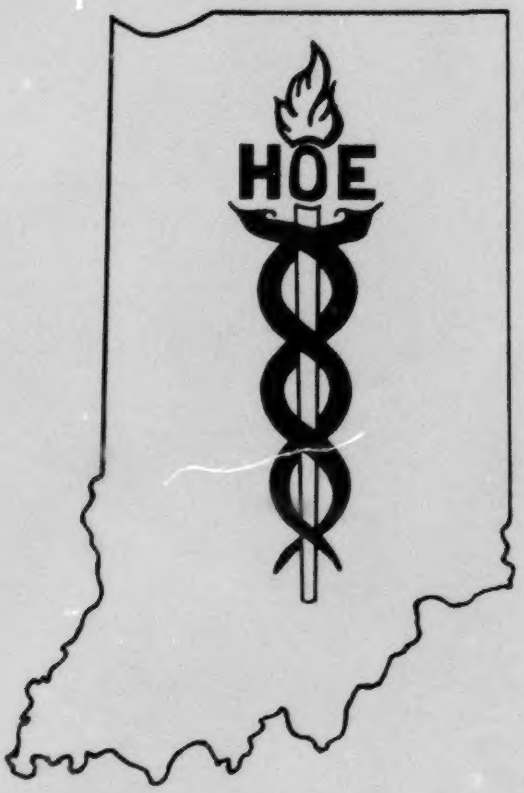
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

A - 9 - 4

MEDICATION ORDERS - WHAT THEY MEAN

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MEDICATION ORDERS - WHAT THEY MEAN

GOAL

A doctor's order is needed before any member of the health care team may administer a medication. Whether the medication is ordered on a doctor's order sheet in a health agency or on a prescription blank, there are seven basic parts and each part must be included for the order to be valid. To save time and effort for all members of the health team involved with medications, many abbreviations and symbols are used in the medication order. So that errors can be avoided, all parts of a medication order, plus the abbreviations, and symbols used therein, must be understood and followed correctly. Therefore, it is important that all medication personnel pay utmost attention to the information contained in this module.

This module will provide the health care worker involved with medications, an entry level competence in interpreting a doctor's medication order.

TURN TO NEXT PAGE

USE OF LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on page 55 to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATION ORDERS - WHAT THEY MEAN

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study:

1. Modules # A-9-1, # A-9-2 and # A-9-3
2. All pre-requisites listed for # A-9-1, # A-9-2 and # A-9-3

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have _not_ completed these areas of study

SEE YOUR TEACHER

MEDICATION ORDERS - WHAT THEY MEAN

Your objective for this module is as follows:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in 40 minutes or less, you will:

1. Identify the seven parts of a doctor's medication order
2. Recall what is meant by the term, "system of measurement"
3. Identify the basic units of measurement for each of the 3 systems of measurement used for medications indicating which measurement is for which system
4. Interpret the abbreviations and symbols used for the systems of measurement for doctor's orders, by system
5. Identify the routes of medication administration by medical name
6. Interpret abbreviations and symbols used to designate time, methods and areas of administering medications

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's text, Medications and Mathematics For The Nurse, read pages 1, 4-5, 28-32, 62 (starting with The Medication) - 65 (stopping at Reaction to Medication), 77-81. All students are expected to take notes on reading assignments.

REVIEW:

In preparation for the lecture and work sheets that you will do later, examine page 58 of this module on the review of Roman Numerals. If available in your agency, view two filmstrips by TRAINEX, BN-285 "The Metric System" and BN-286 "Apothecary Measurement."

LECTURE:

At the time designated by your teacher, attend the lecture on "Medication Orders - What They Mean." To assist you, an outline of the lecture may be found in this module. You are expected to take notes during the lecture.

WORKSHEET:

Following the lecture you will do the practice worksheets. These will help you use the abbreviations, symbols and systems of measurement that were discussed in the lecture. What you do not finish in class time, you should do on your own time.

STUDY:

To prepare yourself for the Master Test, study your notes carefully. Be certain you can achieve the objective.

CHECK LIST:

Complete the check list.

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REVIEW OF ROMAN NUMERALS

ACTIVITIES

Be sure to know Roman Numerals. You will find them sometimes on physicians' orders, medicine cards and prescriptions.

1 - I
2 - II
3 - III
4 - IV
5 - V
6 - VI
7 - VII
8 - VIII
9 - IX
10 - X
11 - XI
12 - XII
13 - XIII
14 - XIV
15 - XV
16 - XVI
17 - XVII
18 - XVIII
19 - XIX
20 - XX
21 - XXI
22 - XXII
23 - XXIII
24 - XXIV
25 - XXV
26 - XXVI
27 - XXVII
28 - XXVIII
29 - XXIX
30 - XXX
40 - XL
50 - L
60 - LX
70 - LXX
80 - LXXX
90 - XC
100 - C
200 - CC
300 - CCC
400 - CD
500 - D
600 - DC
900 - CM
1000 - M

Some rules to remember:

1. Whenever a Roman numeral is repeated, add the numerals.

   Example: III - 3   XX - 20

2. Whenever a larger Roman numeral comes before a smaller one, the numerals are added.

   Example: VI - 6   XII - 12   XVI - 16

3. Whenever a smaller Roman numeral precedes a larger one, the values are subtracted.

   Example: IV - 4   IX - 9

4. A number of lesser value is placed between numbers of higher value and read in connection with the number following it.

   Example: XIV - 14   XIX - 19

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture be sure to note the following:

A. A Medication Order
  1. Written by doctor (medical doctor, doctor of dentistry, doctor of osteopathy, etc.)
  2. Written on patient's chart
  3. Written as a prescription
  4. Given as verbal or telephone order - this is only done in emergency or to speed up care of patient - can only be received by R.N., L.P.N., or Pharmacist - must be signed by doctor within 48 hours
  5. Content of order - patient's chart
    a. name of patient
    b. date and time of order
    c. name of medication
    d. dosage of medication
    e. time and frequency of administration
    f. route by which administered - if not stated - it is assumed to be oral
    g. the doctor's signature
  6. Content of prescription - contains same information as patient's chart, plus special symbols and abbreviations - used to control sale of medications which need supervision of doctor

B. Systems of Measurement
  1. Medications must be precise in amount
    a. dry substances have weight
    b. liquid substances occupy space volume

LECTURE OUTLINE

ACTIVITIES

B. Cont.

  2. Definition - a universally accepted standard which assures accuracy in the weighing and measuring of medications
  3. Three systems used in medications in United States
     a. Household System - not completely accurate
        (1) varying sizes of measuring devices
        (2) used some for medications in home
        (3) units of measure for dry (weight) and liquids (volume)
        (4) has some abbreviations that shorten order
            Example: tsp - teaspoon
        (5) uses Arabic numerals and fractions of whole if less than one
        (6) uses length for some areas of measuring
     b. Apothecaries' System
        (1) brought to United States from England during colonial period
        (2) ancient word for pharmacist or druggist
        (3) uses abbreviations plus some symbols
            Example: gr - grain ʒ - dram
        (4) uses mostly Roman numerals to designate amount
            Example: iii - 3
        (5) Roman numerals are placed after the symbol
            Example: gr iii - 3 grains

LECTURE OUTLINE

ACTIVITIES

B. 3. Cont.

- c. Metric System
    - (1) invented by French in late 18th century
    - (2) used almost exclusively in Europe - United States slowly converting - Apothecary system being used less frequently
    - (3) basic units of measure
        - (a) meter - length
        - (b) gram - weight (dry)
        - (c) liter - volume (wet)
        - (d) celsius - temperature
    - (4) Arabic numbers used - system based on tens, "multiples" of tens or "divisions" of tens
    - (5) anything less than whole number is in decimals and written with 0.number -- example: 0.5
    - (6) prefixes (certain letters before the basic unit) are used to designate numbers - indicate if number is greater or less than unit

        example: 1000 grams is called a kilogram

        $\frac{1}{1000}$ gram is called a milligram
    - (7) abbreviations are used to shorten the physician's order

LECTURE OUTLINE

ACTIVITIES

B. 3. Cont.

- d. Conversion between systems
    - (1) dosage in doctor's order may be different from dosage on hand
    - (2) there is another method of changing from one system to another - called conversion
    - (3) conversion often not exact - only approximate
    - (4) conversions are to be done by Pharmacist, R.N. or L.P.N. (should verify if necessary)
- e. Comparison of Measurements of Three Systems

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COMPARISON OF MEASUREMENTS OF THREE SYSTEMS
Smallest to Largest Measurement with Abbreviation or Symbol

HOUSEHOLD		APOTHECARIES'		METRIC		
DRY	WET	DRY	WET	DRY	WET	LENGTH
1. pinch	1. drop (gtt)	1. grain (gr)	1. minim (m)	1. milligram (mg)	1. milliliter (ml) or cubic centimeter (cc)	1. millimeter (mm)
2. teaspoon (tsp)	2. teaspoon (tsp)	2. dram (ʒ)	2. fluid dram (fʒ)	2. centigram (cg)	2. centiliter (cl)	2. centimeter (cm)
3. tablespoon (tbsp)	3. tablespoon (tbsp)	3. ounce (o℥)	3. fluid ounce (f℥)	3. decigram (dg)	3. deciliter (dl)	3. decimeter (dm)
4. ounce (oz)	4. ounce (oz)	4. pound (lb)	4. pint (pt or O)	4. gram* (Gm)	4. liter* (L)	4. meter* (M)
5. pound (lb)	5. cup (c)		5. quart (qt or Q)	5. decagram (dag)	5. decaliter (dal)	5. decameter (dam)
6. ton	6. pint (pt)		6. gallon (gal or C)	6. hectogram (hg)	6. hectoliter (hl)	6. hectometer (hm)
	7. quart (qt)			7. kilogram (Kg)	7. kiloliter (Kl)	7. kilometer (Km)
	8. gallon (gal)					

*basic measurements

LECTURE OUTLINE

ACTIVITIES

C. Abbreviations used to designate time and frequency

1. Abbreviations used to designate number of times per day
   - a) b.i.d. - twice a day
   - b) t.i.d. - three times a day
   - c) q.i.d. - four times a day
   - d) q.d. - daily
   - e) q.o.d. - every other day
   - f) h.s. - at bedtime
   - g) a.c. - before meals
   - h) p.c. - after meals

2. Abbreviations used to designate the number of hours apart for the administrations of drugs
   - a) q.h. - every hour
   - b) q.2h - every two hours
   - c) q.3h - every three hours
   - d) q.4h - every four hours

3. Abbreviations used to designate medications ordered as needed
   - a) ad. lib. - as desired
   - b) stat - immediately; now
   - c) s.o.s. - if necessary, one time only
   - d) p.r.n. - as needed; usually ordered with a certain time interval

     Ex: Thorazine 50mg. I.M. p.r.n. q.4h
     The p.r.n. means that the medication is given when the patien needs it. The q.4h is a safeguard, meaning that if a patient should need another p.r.n. injection, it should be given at least four hours after the first p.r.n. injection.

4. Examples of time schedules for daily medications
   - a) q.d. - 9 A.M.
   - b) b.i.d. - 9 A.M. - 5 P.M.
   - c) t.i.d. - 9 A.M. - 1 P.M. - 5 P.M.
   - d) q.i.d. - 9 A.M. - 1 P.M. - 5 P.M. - 9 P.M.
   - e) h.s. - 8 P.M. or 9 P.M.
   - f) a.c. - one-half hour before meals
   - g) p.c. - one-half hour after meals

   Remember - Daily time schedules are not the same in all institutions. Be sure to know the time schedules for daily medications in your institution

ACTIVITIES

D. Related Terms and Abbreviations You Need To Know

ABBREVIATION	MEANING
ad lib	freely as desired
cap.	capsule
d.c.	discontinue
c	with
s	without
gtts.	drops
p.o.	by mouth
n.p.o.	nothing by mouth
Sig.	directions to patient written on the label
o.d.	right eye
o.s.	left eye
o.u.	both eyes
Rx	take
ss	one-half

LECTURE OUTLINE

ACTIVITIES

E. ROUTES FOR ADMINISTERING MEDICATIONS

ROUTE	HOW MEDICATION IS ADMINISTERED	TERM USED TO DESCRIBE ROUTE
Given by mouth	Having patient swallow the medication	Oral Administration (P.O.*) per os
Given via the respiratory tract	Having the patient inhale the medication	Inhalation
Given by injection	Injecting medication into:	
	1. subcutaneous tissue	Hypodermic or subcutaneous injection (S.C.*)
	2. muscle tissue	Intramuscular injection (I.M.*)
	3. under epidermis	Intradermal injection (I.D.*)
	4. vein	Intravenous injection (I.V.*)
Given by placing on skin or mucous membrane	Inserting medication into:	
	1. Vagina	Vaginal administration
	2. Rectum	Rectal administration
	3. Eye	Eye instillation
	4. Ear	Ear instillation
	5. Nose	Nasal instillation
	Placing medication under tongue	Sublingual administration (S.L.*)
	Placing medication between teeth and mucous membrane of the cheek	Buccal
	Placing medication on skin	Topical application
	Rubbing medication into skin	Inunction
	Placing medication in direct contact with mucous membrane	Instillation
	Flushing mucous membrane with medication	Irrigation

* Refers to abbreviations used to designate routes of administration

WORK SHEET FOR APOTHECARIES'

ACTIVITIES PART I

A. Write the correct abbreviations and/or symbols for the following measurements:

1. gallon ________
2. quart ________
3. pint ________
4. ounce ________
5. pound ________
6. grain ________

B. Write the correct symbols for the following:

1. ounce ________
2. dram ________
3. minim ________
4. pint ________

C. Interpret the following dosages:

1. ℥iiss ________
2. ʒiv ________
3. ℥ii ________
4. ℥ss ________
5. ʒviii ________
6. m.xiii ________
7. m.vii ________
8. gr. viiss ________
9. gr. xx ________
10. gr. xv ________
11. gr DCCXX ________
12. f℥LXXX ________
13. m. CCC ________
14. m.xix ________
15. fʒxxxiii ________

D. Write the following as they would appear in a medication order

1. 3 grams ________
2. 1½ grains ________
3. 4 drams ________
4. 2 ounces ________
5. ½ grain ________
6. 10 drops ________
7. 15 minims ________
8. ¼ grain ________
9. 1 fluid dram ________
10. 4 fluid ounces ________

(Check your answers on page 70)

WORK SHEET FOR METRICS

ACTIVITIES PART II

A. Write the abbreviations for the following:

1. liter ________
2. gram ________
3. milliliter ________
4. milligram ________
5. cubic centimeter ________

B. Write the following dosages, using the correct abbreviations and numbers:

1. One and one-half grams ________
2. Three tenths of a milligram ________
3. Seven hundredths of a milliliter ________
4. Three-fourths of a liter ________
5. Two and one-half milligrams ________

C. Write the following as they would be read aloud:

1. 1.0 Gm. ______________________________
2. 0.5 Gm. ______________________________
3. 0.05 Gm. ______________________________
4. 0.3 Gm. ______________________________
5. 625 mg. ______________________________
6. 4.0 mg. ______________________________
7. 250 mg. ______________________________

D. Write the following using the correct symbols, numbers and abbreviations

1. Three ounces of Mineral oil ______________________
2. One and one-half drams of Cascara ______________________
3. Fifteen minims of Tincture of Belladonna ______________________
4. One-half dram of Elixir of Donnatal ______________________
5. Five grains of Aspirin ______________________

(Check your answers on page 71)

WORK SHEET FOR INTERPRETATION

ACTIVITIES PART III

Interpret the following doctors orders:

1. Achromycin 500 mg stat and 250 mg p.o. t.i.d. a.c.

2. Maalox ℥ss q. h. on the h and ℥iv Milk on the half hour

3. Gantanol tab iv stat then tab i q.i.d. x four days

4. Nembutal gr iss @ h.s. p.r.n.

5. Hydrodiuril 50 mg tab i q.o.d. @ 9 a.m. p.o.

6. Neo-Decadron Ophth. Sol. gtt i o.u. stat & q 2 h

7. Phenergan supp. 12.5 mg per rectum, q 4 h prn. nausea and vomiting

8. Demerol 25 mg p.o. s.o.s.

(Check your answers on page 71)

ANSWERS TO
WORKSHEETS

ACTIVITIES PART I

A. 1. gal or C
2. pt. or Q
3. pt. or 0
4. oz.
5. lb.
6. gr.

B. 1. ℥ 2. ʒ 3. m. 4. 0.

C. 1. 2½ ounces
2. 4 ounces
3. 2 drams
4. one-half ounce
5. 8 drams
6. 13 minims
7. 7 minims
8. 7½ grains
9. 20 grains
10. 15 grains
11. 720 grains
12. 80 fluid ounces
13. 300 minims
14. 19 minims
15. 33 fluid drams

D. 1. 3 Gm
2. gr iss
3. ʒiv
4 ℥ii
5. gr ss
6. gtt. x
7. m. xv
8. gr ¼
9. fʒi
10. f℥iv

ANSWERS TO
WORKSHEETS

ACTIVITIES PART II

A. 1. L 2. Gm 3. ml 4. mg 5. CC

B. 1. 1.5 Gm 2. .3 mg 3. .07 ml 4. .75 L 5. 2.5 mg

C. 1. one gram
   2. one-half or five tenths gram
   3. five hundredths gram
   4. three tenths gram
   5. six hundred twenty-five milligrams
   6. four milligrams
   7. two hundred fifty milligrams

D. 1. mineral oil ℥iii 4. Elix. Donnatal ℥ss
   2. cascara ℥iss 5. Aspirin gr v
   3. Tr. Belladonna m. XV

PART III

1. 500 milligrams Achromycin immediately by mouth and then 250 milligrams 3 times daily before meals
2. ½ ounce Maalox every hour on the hour and 4 ounces milk on the half hour
3. 4 tablets Gantanol immediately then 1 tablet four times daily for four days
4. 1½ grains Nembutal at bedtime as desired
5. 50 milligrams Hydrodiuril 1 tablet every other day at 9 a.m. by mouth
6. one drop Neo-Decadron Ophthalmic solution in both eyes immediately and every two hours
7. 12.5 milligrams Phenergan suppository by rectum every four hours as needed for nausea and vomiting
8. 25 milligrams Demerol by mouth, if necessary, one time only

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reference		
Review Sheet		
Film Strips (if available)		
Lecture		
Work Sheets		
Study		

Instructor's Signature ______________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

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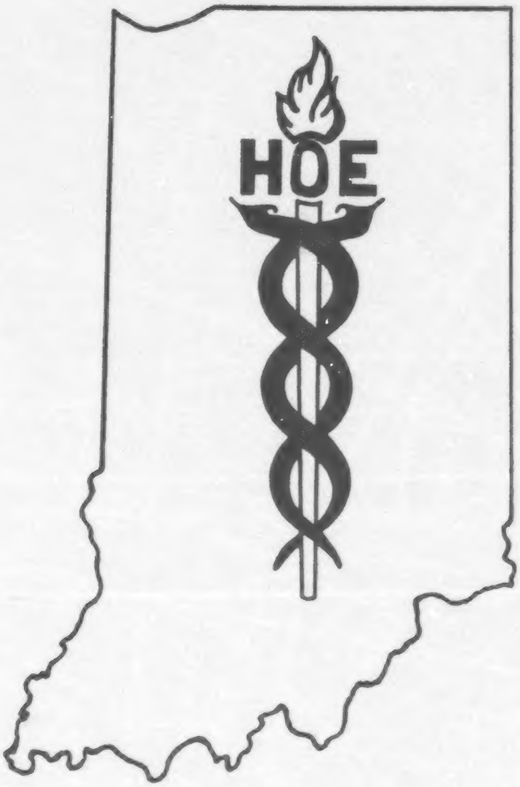
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 5

PRINCIPLES OF MEDICATION ADMINISTRATION

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FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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PRINCIPLES OF MEDICATION ADMINISTRATION

GOAL

The goal of all health care workers is to maintain and restore health to their patients, plus prevent disease for all, if possible. This goal is primarily reached through patient care. Medication therapy is an important part of patient care and patients have a right to expect safe, efficient care. Therefore, every effort must be made to avoid errors and accidents. Specific rules and standardized safety precautions must be followed closely by all medication personnel to prevent errors and accidents.

Drug abuse has become a major health and social problem in this country in recent years. Drugs that can be abused are carefully safeguarded by a system of federal control to prevent their being illegally obtained or in the possession of unauthorized persons. Additional safeguarding of controlled substances is the responsibility of all individuals in the administration of medications.

This module will provide the health care worker, involved in medication administration, with tbe essential information needed to administer all medications safely, plus prevent errors while safeguarding controlled substances.

TURN TO NEXT PAGE

USE OF LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for the module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

PRINCIPLES OF MEDICATION ADMINISTRATION

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study:

1. Environmental Safety for the Health Worker
2. Modules # A-9-1, # A-9-2, # A-9-3 and # A-9-4
3. Pre-requisites required for Modules # A-9-1 through # A-9-4

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

PRINCIPLES OF MEDICATION ADMINISTRATION

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy, in 30 minutes or less you will:

1. Identify three advantages of unit dose packaging, including the main one
2. Identify safety precautions which should be taken during the preparation, transportation and administration of medications
3. Recognize the proper procedure to follow for omitted or refused medications
4. List the "five rights" of medication administration
5. Identify the kinds of substances found in each of the five controlled substances schedules and an example for each schedule
6. Recall the major safety precautions agencies use to prevent errors in dispensing controlled substances

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

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STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

Before the lecture, from Skelley's Medications and Mathematics for the Nurse, read pages 55, 66, 74, 83-87 (stop at Suggested Activities) 90-95 (stop at Suggested Activities), 235 (bottom), 237 (bottom) and 238 (top). All Students are expected to take notes on their reading.

OBSERVATION:

Before the lecture, take time to make observations regarding the preparation and administration of medications in the agency where you work. Answer the questions on page 80 .

LECTURE:

At the time designated by the teacher, attend the lecture on "Principles of Medication Administration." An outline of the lecture can be found in this module. All students are expected to take notes during the lecture.

GROUP DISCUSSION:

Following the lecture, your teacher will lead you in a group discussion based on the questions that you answered for the Observation found on page 80 .

STUDY:

Be certain to study your lecture notes very thoroughly in preparation for the Master Test. Make certain you can reach the objective.

CHECK LIST:

Check off the activities on the check list as you complete them.

OBSERVATION

ACTIVITIES

Do your best to answer the following questions based on observations you made in the agency where you work.

1. What is the correct procedure for transcribing doctors' orders in your agency?

2. What role does the pharmacist have regarding medications used in your agency?

3. What is the role of RNs, LPNs and Medication Aides in your agency?

4. Are medication cards and the Kardex used in your agency?

5. How are the patients charged for medications?

6. Who is responsible for checking the Kardex (or whatever system is used) with the doctors' orders?

7. What would a medication person do, in your agency, if they had a medication card for a given medicine but the order did not appear on the Kardex or vice versa?

(These questions will be used in the Group Discussion)

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be certain to note the following:

A. Pattern of Medication Administration

1. Doctor writes order in appointed place (agency policy) usually patient's chart
2. Medication order sent to pharmacist for filling (agency method)
3. Medication sent to medication area of agency nearest to patient and stored for dispensing - amount may be single dose, one day or several days' supply - supplied by pharmacist packaging
    a. bulk floor stock - supplies kept on nursing unit - almost obsolete
        (1) easily contaminated
        (2) difficult to identify when prepared
        (3) medication effectiveness may be lost
        (4) errors may occur
    b. individual patient medication - own container - labeled according to doctor's order - similar to prescription
        (1) economical
        (2) safer than stock
        (3) still contaminated fairly easily
    c. unit-dose packaging - each dose sealed and labeled
        (1) product easily identified (high accuracy)*
        (2) no contamination
        (3) saves preparation
        (4) can be credited if returned to pharamcy
        (5) helps save supplies
        (6) more expensive
4. Dispensing of medication variable - charts can't be carried with medicines
    a. medication order transcribed (copied) onto Medication Kardex - convenient card system for each patient in "flip" type carrier - nurse can see doctor's orders at a glance for each patient - must be checked frequently

*Most important advantage

LECTURE OUTLINE

ACTIVITIES

A. 4. Cont.

b. medication order may also be transcribed to Medication Cards - small stiff cards (about 1½" x 3") - if used these will accompany medications on cart or tray for identification

c. both Kardex cards and Medication cards should have following information:

(1) room number and bed number
(2) patient's name
(3) name of medication
(4) dose of medication
(5) time or times medication shoud be given
(6) start date
(7) stop date (if indicated)
(8) the initials of person making out the medicine card or Kardex

d. traditional method of dispensing out the medications

(1) use of medication cards (checked against Kardex every shift)
(2) medication person takes cards to medication area - each card used for each medication prepared
(3) card remains with medication until administered
(4) when medication discontinued or changed - card destroyed by charge nurse
(5) very time consuming
(6) many errors due to transcription

e. dispensing by unit dose

(1) small pharmacy substation or self-contained medication storage cart
(2) pharmacist prepares each dose of medication or prepares for each shift directly from medication order
(3) medications person transcribes order onto Kardex or medicine card from medication order
(4) individually prepared doses save time

ACTIVITIES

A. 4. e. Cont.

(5) many times charting system maintained on Kardex - medication can be charted as soon as given
(6) high degree of accuracy, speed and convenience
(7) refill medication orders - handled entirely by pharmacist
(8) unused or discontinued medication removed
(9) bulk stock no longer needed

B. General Considerations When Administering Medications

1. Safety precautions which help to avoid errors when preparing medications

a. use aseptic technique when administering medications. Wash hands before handling medications. Helps to reduce direct or indirect transfer of microorganisms from one person or place to another.

b. Good lighting should be available when preparing medications

c. Work alone to avoid distractions and interruptions while preparing drugs. Do not leave medications unattended during preparation. If you must leave, place the medications in a locked area.

d. Read the label three times (will be covered in Module # A-9-23, "Preparation of Medications")

e. Make sure that the information on the medicine card or Kardex corresponds exactly with the label on the patient's medication.

f. Never give a medicine from an unlabeled container or from one which the label is not legible. Never re-label the medication yourself. Notify the charge nurse.

g. Do not administer medications which have been prepared by someone else. To prevent errors it is important that the same person prepare, administer, and chart each medication.

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LECTURE OUTLINE

ACTIVITIES

B. 1. Cont.

h. Check the expiration date if it appears on the container. Do not give outdated or discolored drugs.

i. Never return an unused dose of medicine to a stock bottle.

j. If the physician or registered nurse asks you to prepare a dose of medication for them to administer, go ahead and prepare the medication. Place the prepared medication and the container from which it came on a tray and take it to the individual who requested the medication. This procedure assures the individual that it is the medication which had been requested.

2. Safety precautions which prevent accidents during transportation of the medication to the patient

a. Special trays or carts on which to carry medications to the patients are provided.

b. The tray or cart must never be out of the sight of the individual who is administering medications. This prevents persons from taking medications not intended for them. Also, the possibility of accidental dislodging of cards or spilling of medications is decreased.

3. Safety precautions which prevent errors during the administration of medications

a. Identify the patient. Call the patient by name. Ask the patient to state his name, always check the identity before administering the medication.

b. Remain with the patient while he takes the medication and see that the drug is swallowed before leaving the patient. Do not leave medications for the patient to take later unless specified by the physician.

c. Do not have any patient carry or administer medications to another patient.

LECTURE OUTLINE

ACTIVITIES

B. 3. Cont.

d. If a patient expresses doubt or concern about a dosage of medication, the individual who is administering the medication must do everything possible to make certain that no mistake has occurred. Occasionally the patient may be right. The original physician's order or the label on the medications may need to be checked.

4. Charting

a. Chart as soon as possible after the medication has been administered. This avoids the possiblity of repeating the administration of the drug. (More detailed information on charting medications may be found in the next module #A-9-6.)

5. Omitted or refused drugs

a. Omission of a medication should be reported as soon as it is detected. The doctor or charge nurse will determine if the dose should be given at that time.

b. Drugs may be omitted for legitimate reasons, such as suspected allergy, N.P.O. for diagnostic tests. Be sure to chart the omission on the patient's chart.

c. If a patient refuses a medication, try to help the patient accept the drug which he needs. If all reasonable efforts fail to accomplish this, it is unwise to continue urging a patient who adamantly refuses a medication. Refusals to take a prescribed medication and the manner in which the situation was handled should be described on the patient's chart. The charge nurse and the doctor should be notified.

C. Five Rights of Medication Administration

1. Give the right medication - check label on medication with order, Kardex or card

2. Give the right dose - check order with label (if different check with charge nurse)

3. Give medication to the right patient - check name on Kardex or card with I.D. band (or other means of identifying patient)

LECTURE OUTLINE

ACTIVITIES

C. Continued

4. Give medication by right route of administration - check order, Kardex and label

5. Give medication at right time - check order, Kardex and label

   (All very important - Must always be remembered)

D. Safety Precautions for Controlled Substances

1. Controlled Substance Act of 1970 - extablished five schedules for all controlled substances (those capable of being abused)

2. Reviewed yearly, substances may be moved from one category to another

3. Five controlled substances schedules

   a. Schedule I - drugs that have high potential for abuse and have no accepted medical use at this time
      Examples: Heroin, Marijuana, LSD

   b. Schedule II - drugs that have high potential for abuse and do have a medical use. every refill requires a new written order from the physician
      Examples: Morphine, Demerol (meperidine), codeine

   c. Schedule III - drugs with moderately high abuse potential, often used as medical treatment
      Examples: barbiturates such as phenobarbital, medications combined with codeine such as Tylenol with Codeine

   d. Schedule IV - drugs with less potential for abuse than schedule III - many mild sedatives and anti-anxiety drugs (tranquilizers)
      Examples: Noctec, Valium, Librium

   e. Schedule V - drugs with low abuse potential, usually require prescription
      Examples: Lomotil, Imodium

4. Law requires special precautions

   a. Schedule II drug orders may not be refilled - must have new written order
   b. Controlled Substances must be accounted for by the health facility (are kept locked and counted regularly)

ACTIVITIES

D. 4. Continued

c. Keys to controlled substances must be carried by medication person at all times

d. Special accountability forms used to keep records of drug use usually required:

1. name of patient receiving drug
2. amount of drug used
3. time given to patient
4. name of individual administering drug
5. name of doctor

e. Periodic counting of controlled substances depends on policy of institution, usually every shift change schedule II drugs counted, sometimes schedule III

f. Disposal of wasted or contaminated controlled substance must be done by charge nurse and pharmacist

DO NOT DISPOSE OF WASTED OR CONTAMINATED CONTROLLED SUBSTANCE YOURSELF. Give it to your charge nurse.

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Observation		
Lecture		
Group Discussion		

Instructor's Signature ______________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

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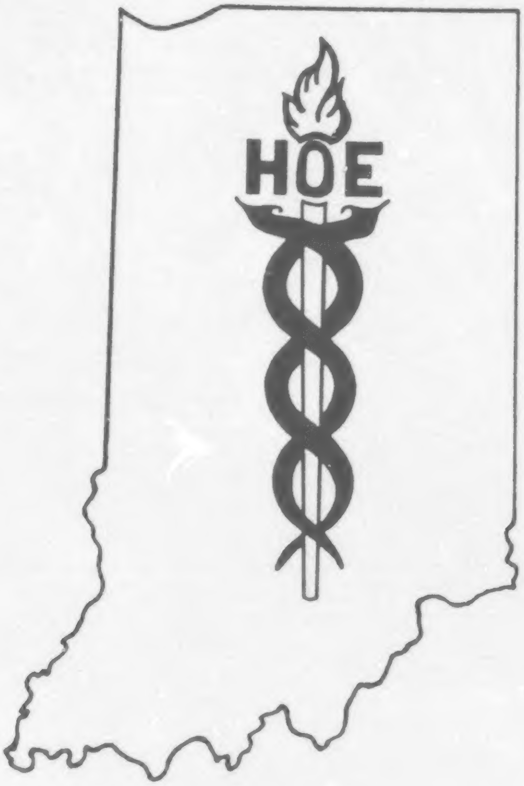
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 6

CHARTING MEDICATIONS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER
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FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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CHARTING MEDICATIONS

GOAL

Health agencies place forms used for each patient in a folder or binder and all of this material makes up the patient's record. In some agencies, the word chart is used instead. The chart provides a complete history of the patient's method(s) of treatment, reaction to treatment, and general progress while in the health care facility. The process of making entries on the patient's chart is called recording or charting.

Each health agency follows certain policies and procedures in relation to record keeping such as: the personnel who are repsonsible for writing on each form; the order in which forms appear in the record; the frequency with which information is recorded; the manner in which health workers identify themselves at the end of each entry; and which types of abbreviations are acceptable.

This module will provide the health care worker with information and practice to properly record medications and chart observations related to medications with an entry level ability.

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the following page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities on page 95. Take a few minutes to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

90

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Essentials of Charting
2. Modules # A-9-1 through # A-9-5
3. Pre-requisites for Modules # A-9-1 through # A-9-5

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

CHARTING MEDICATIONS

Your objective for this module consists of the following:

OBJECTIVE

Given two (2) of four possible patient situations, a list of medications for those situations and the proper charting materials, with 100% accuracy and in not more than 30 minutes, you will record:

1. necessary information on the nurses' notes
2. essential information on the Schedule II and/or Schedule III controlled medication sheet
3. medications administered on the medication sheet

FOR STUDENT ACTIVITIES GO TO PAGE 95

STUDENT ACTIVITIES

INSTRUCTIONS

OBSERVATION:

Before reading the information in this module, ask the charge nurse, in the agency where you work, if you may look at a medications record, a nurses' notes and a controlled medication sheet. In the space provided on page 97 of this module, briefly list the different areas that you found on each sheet, then answer the questions on page 98 .

INFORMATION:

Before going to class read the information given on page 99-104 of the module regarding charting. Be sure to underline items you do not understand or have questions about. Review descriptive charting terms on page 123 .

GROUP DISCUSSION:

At the designated class time, participate in the group discussion pertaining to "Charting Medications." If the teacher has examples of recording forms to look at, examine these. Verify with the teacher how to record on the medication record.

PRACTICE:

During class time, select at least two of the patient situations which start on page 105 . Observe the corresponding Kardex card for your situations on that same page. Assume you have verified the order, prepared and administered the medication and the patient had the reactions as indicated. Using the correct recording methods discussed in the group session and given in the module, chart on the proper forms for the medications you have chosen. When completed, have the teacher check your charting. Practice all examples, if you wish, on your own.

STUDENT ACTIVITIES

INSTRUCTIONS

Continued

STUDY:

Review the information thoroughly in the module and your corrected charting. Be sure you can meet the objective.

CHECK LIST:

As you complete each activity, check it off on the check list.

OBSERVATION

ACTIVITIES

In the space provided below, briefly list the information you found on the following records:

I. A Medication Record

II. A Nurses' Notes

III. A Controlled Medication Sheet

GO ON TO NEXT PAGE

ACTIVITIES

1. What items, if any, were included on all three forms? __________

2. Why do you think these items were included on all forms related to medications? __________

3. Were items such as diet, age and diagnosis included on the "medications record? _____ If so, why do you think they were included?

4. What is different about the controlled substance sheet? __________

LECTURE OUTLINE

ACTIVITIES

A. Medical Records

There are a variety of printed forms that health agencies use for keeping records. These include nurses' notes; physician's order sheets; medication records; history and physical examination sheets; progress records; laboratory report forms; consent forms; etc.

The extent to which you will be responsible for aspects of record keeping will depend on the practice in your particular health care facility. Your responsibility will be further determined by the method of record keeping that is used by the facility.

Regardless of the system of record keeping or charting used, the patient's record is used for several purposes. It is a way to exchange information among health practitioners, it is used to plan patient care, and also may be used for research purposes. The ability to make accurate, concise entries into the patient record is very important.

B. The Patient's Record as a Legal Document

As a legal record the chart must conform to certain legal standards. All entries must be in ink so that changes are noticeable and the record will be permanent. Legibility (ability to read what is written) is of critical importance, since statements that are not legible are not usable. The color of ink used is established by facility policies and may differ in different institutions.

Charts are legally protected as the private record of the patient's care. Access to the record is restricted to those in the facility using it for care, and in some instances, for research or teaching. The length of time records are retained depends primarily upon state law. Currently, in the State of Indiana, records are kept a minimum of five years. After this time, they may be destroyed. Information found in a patient's chart is confidential and must never be revealed inappropriately.

LECTURE OUTLINE

ACTIVITIES

When you sign a notation on a patient record, use your first initial and full last name, followed by the abbreviation of your position. Should you make a mistake, do not erase. Rather, draw a single line through the mistake, put the word "error" above it with your initials, and continue the recording with the correct information.

Example:

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS
7/1/81 8^{00}am		error J.D. ~~Q. refused digitalis. J. Doe QMA.~~
8^{45}am		Digitalis omitted - P-46, charge nurse
		notified ——————— J. Doe QMA

In the narrative charting demonstrated above, blank spaces are not left. Should it be appropiate to leave part of a line blank, draw a straight line through the empty space. This mark will prevent later entries from being made in front of your signature. Remember too, notations of date and time are important for health care reasons as well as for legal reasons.

C. Abbreviations and Special Terminology

Traditionally, a great deal of specialized medical terminology has been used in charting. As a beginner, concentrate on describing what you see. If you do not know the medical terminology, or appropriate abbreviation, you will still be understood if you clearly describe the situation. As you progress, you will gain a very large medical vocabulary. Review pages 116 - 120 of this module.

Sentences are reduced to their essential parts in charting. Because the entire chart is about the patient, the subject of the sentence is often omitted when it represents him or her. Be careful when omitting words that your meaning remains clear.

LECTURE OUTLINE

ACTIVITIES

D. The Patient's Record/Chart

The Patient's chart contains medical information on sheets arranged in an orderly manner in a chart holder. A typical chart consists of the following items:

1. Doctor's orders - These orders include the prescriptions and treatments for the patient and are confidential. They are carefully transcribed by the nurse or ward clerk, or both.
2. Medication Records - Every medication should be recorded on this record. Recording the administration of a medication is an essential part of your responsibility in the administration of medications. Forms used for this purpose will vary between agencies. A sample medication record can be found on page 103.
   - (a) Information to be charted
     1. The name and strength of the medication
     2. The time of administration
     3. The dosage of medication
     4. The route of administration
     5. Who administered the medication
   - (b) After a medication is given, either the nurse's initials are recorded in the designated square or a diagonal line is drawn through the hour to indicate the medication has been given. If the medication is not given, the hour or initialed area is circled, and the reason for not giving the medication is entered in the nurses' notes.
   - (c) STAT medications are entered on the medication record and the nurses' notes.
   - (d) P.R.N. medications should be entered on the medication record or on the nurses' notes (agency policy).
   - (e) Medications are charted after they are administered, never before.
   - (f) Often special forms are used for various medications such as Heparin, Insulin, Antibiotics, Narcotics, etc. Be sure to know the special medications records which are used in the facility where you are employed.

LECTURE OUTLINE

ACTIVITIES

D. Cont.

3. Nurses' Notes - Narrative charting is frequently used. As the name implies, narrative charting is a time sequenced narration, or telling of information. This type of narration is easy to follow and most persons find that it traces thought patterns well.

   Example:

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS
2/1/81 8^{00} AM		To dining room by wheelchair. Ate
		poorly. J. Doe QMA
9^{00} AM		Returned to room. A.M. Care given
		Dr. Smith here. R.O.M exercises
		started to L. arm. J Doe QMA

One of the problems of narrative charting is the difficulty experienced in trying to find relevant data regarding a single problem, since a great deal of material must be read to gather a small amount of information. Thus some modifications have been made by individual facilities. Recently nursing entries have been combined with those of other specialties and a Patient Progress Form is used. This form is used for nurses' progress notes in POMR charting (Problem Oriented Medical Record).

In order to make pertinent observations in the nurses' notes about medication you administer, you must know what the medication is expected to do, the usual dosage, onset of action, and any unexpected actions. In general, after administering oral medications you would need to wait at least thirty to sixty minutes for the effects to be noted. It normally takes that time for absorption to occur.

LECTURE OUTLINE

ACTIVITIES

After administering the medication, you need to check back on your patient to observe the effect. It is not wise to walk in and say that you are there to see how the medication is affecting the patient. It would be less alarming to ask him if he needed anything, or you might have some other reason for stopping back. While you are there, you can check the patient or observe his color, signs of perspiration, rash, obvious changes in vital signs, or for any comments from the patient about ill effects such as nausea or headache. You need to observe for both positive and negative effects.

4. History and Physical - This sheet contains pertinent personal information about the patient, such as name, address, occupation, marital status, next of kin, date of admission, past medical conditions, surgeries, allergies, etc.

5. Laboratory and X-ray Reports - These forms summarize the various tests and x-ray administered to the patient.

6. Miscellaneous Forms - All signed permission papers, clothing sheets, consultations, social service records, etc. will be found in this section of the chart.

E. Medication Related Forms Kept Separately

1. Incident report - Medication errors and any other accident or incident must be reported on an "incident report." Always notify your charge nurse of any accident or incident.

2. Kardex - Contains record of medication and treatment orders, nursing care plans, other important information about the patient. The term, Kardex, derives its name from the standard method of filing these cards. See example in this module.

3. Controll Substance Records - These records are to keep count of the controlled medication ordered for each patient. A separate sheet is required for each medication. The following information is usually required:
    1. The name of the patient receiving the medication.
    2. The hour the medication was given.
    3. The amount of the medication used.
    4. The name of the individual who administers the medication.
    5. The name of the physician prescribing the medication.

F. The Charting Procedure

When you are ready to chart, review all the activities in which you have engaged and the observations you have made. Start with specialized checklists and graphs in the chart. Fill each one in appropriately. The forms will help to remind you of what needs to be recorded. Go over each sheet thoroughly to make sure you have not forgotten anything. Sign each form as required by the facility. Do not needlessly duplicate information that has been charted on special forms unless your facilities require it.

CHARTING SITUATIONS

ACTIVITIES

SITUATION # 1

On February 1, 1981, you are assigned to give medications on the 7-3 shift. One of your patients is Mrs. Betty Jones, age 68, in room 653. She has Diabetes and Angina Pectoris. After report you make rounds to see all of your patients. Mrs. Jones tells you she is having dull chest pain and asks for her pain medication. You return to the nurses' station and prepare Mrs. Jones' 8:00 a.m. medications and her PRN for pain. The codeine bottle you pour from contains 30 tablets. When you administer Mrs. Jones' medications she complains of shortness of breath but takes the medications without difficulty. At 8:30 a.m. when you check her again, Mrs. Jones says her pain is gone and she is resting. Chart the medications you gave and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
1/16/81	Nitrobid Span 2.5mg. ṫ daily	8AM			
1/16/81	Diabenese 250MG. Tab ṫ daily	8AM			
1/16/81	Metamucil 2 rounded Teaspoons in				
	full glass of water - daily	8AM			
1/16/81	Codeine 30MG Tab ṫ q4h prn/pain				

DIAGNOSIS: Diabetes Angina Pectoris			DIET: 1200 cal Diabetic
Jones, Betty	# 653	AGE: 68	DR. White

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Jones, Betty PHYSICIAN Dr. White MEDICAL CASE # 128765

NURSES NOTES

30 DAY MEDICATION RECORD Feb. 1981

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
1/16/81 Nitrobid Span 2.5 mg give one daily 8Am	8																	
1/16/81 Diabinese 250 mg. give one Tab daily 8Am	8																	
1/16/81 Metamucil powder - give 2 rounded Teaspoons in full glass of water daily	8																	
1/16/81 Codeine 30 mg Tab T q 4 h prn for pain	P R N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies				
DIAGNOSIS	Diabetes, Angina Pectoris	Diet	1200 cal. diabetic		
PHYSICIAN	Dr. White	Rehab Potential	fair		
		ROOM #	PATIENT #	MONTH & YEAR	
PATIENT	Jones, Betty	653	128765	Feb. 1981	

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN
B. CIRCLE INITIALS WHEN MEDICATION REFUSED
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Jones, Betty

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Situation # 1

CONTROLLED SUBSTANCE RECORD

Drug Name and Strength Codeine 30 Mg	Patient's Name Jones, Betty
Script Number 123456	Patient's Number 128765
Physician Dr White	Room Number 653

Date	Time	Rec'd	Used	Bal	Signature
1/16/81	4pm	30	from pharmacy		Joan Adams LPN

CHARTING SITUATIONS

ACTIVITIES

SITUATION # 2

On February 1, 1981, you are assigned to give medications on the 7-3 shift. When you make rounds you find that your patient, Mr. Fredericks, is coughing so much he cannot eat his breakfast. Mr. Fredericks has pneumonia. You check his Kardex and prepare his 8 a.m. medications and his PRN for coughing. Mr. Fredericks takes his PRN but refuses his other medications. You return at 8:30 a.m. to check him. His cough has subsided and he is resting. He still refuses to take his regular medications. Chart the medications you gave and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
1/1/81	Multicebrin cap T qd	8			
1/30/81	Terramycin 250 Mg cap Ṫ q6h	8	2	8	2
	begin 2 pm 1/30/81 last dose 8 Am 2/6/81	Am	Pm	Pm	Am
1/1/81	Milk of Magnesia 30cc hs prn				
	for constipation				
1/30/81	Elixir Terpin Hydrate 4cc q4h prn				
	for cough				

DIAGNOSIS: Pneumonia			DIET: Regular
Fredericks, Steve	#672	AGE: 79	DR. Falls

30 DAY MEDICATION RECORD

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
1/1/81 Multicebrin cap ṫ qd	8																	
1/30/81 - begin 2 pm Terramycin 250 mg cap T q 6 h	8A 2P 8P 2A							LAST DOSE 8 Am 2/6/81										
1/1/81 Milk of Magnesia 30cc hs prn constipation	P R N 8																	
1/30/81 Elixir Terpin Hydrate 4cc q4h prn cough	P R N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies			
DIAGNOSIS	Pnaumonia	Diet	Regular	
PHYSICIAN	Dr. Falls	Rehab Potential	Fair	
PATIENT	Fredericks, Steve	ROOM #	PATIENT #	MONTH & YEAR
		672	11806	Feb 1981

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Fredericks, Steve

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Fredericks, S PHYSICIAN Dr Falls MEDICAL CASE # 11866 NURSES NOTES

ACTIVITIES

SITUATION # 3

On February 3, 1981, you are working 3-11 and are assigned medications. When you made rounds Mr. Timothy Brown told you his bowels had not moved for several days. You promised to check his PRN orders and give him whatever the physician had ordered. Records verify that he has not had a bowel movement for 3 days so you prepare the laxative ordered with your h. s. medications. At 7:30 p.m. when you return from supper the charge nurse tells you Mr. Brown is very agitated. He threw his dinner tray at the dietary worker and refuses to allow anyone in his room until he receives his laxative. The charge nurse advises you to give Mr. Brown his PRN medication for anxiety also. You prepare and administer Mr. Brown's PRN'S and his routine 8 p.m. medications. At 8:30 p.m. when you return he is quiet and more comfortable. His bowels have not moved. Chart the medications you gave and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
1/2/81	Crystodigin 0.1 mg Tab ṫ q h s (ck pulse)				8pm
1/2/81	Peritrate 10 mg Tab ṫ qid.	8	12	4	8
1/2/81	Milk of Magnesia 30cc hs prn				
	for constipation				
1/21/81	Thorazine 25 Mg Tab ṫ q8h prn				
	for agitation/anxiety				
DIAGNOSIS: Angina Pectoris / CHF Organic Brain Syndrome			DIET: Mech Soft		
Brown, Timothy	# 354	AGE: 82	DR. Small		

30 DAY MEDICATION RECORD

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
1/2/81 Peritrate 10 mg Tab T q i d	8																	
	12																	
	4																	
	8																	
1/2/81 Crystodigin 0.1 mg Tab T q h s (check pulse)	Pulse →																	
	8pm																	
1/2/81 Milk of Magnesia 30 cc h s prn for constipation	P																	
	R																	
	N																	
	8																	
1/21/81 Therazine 25 mg Tab T q 8 h prn agitation – anxiety	P																	
	R																	
	N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies				
DIAGNOSIS	Angina Pectoris, CHF Organic Brain Syndrome	Diet	Mechanical Soft		
PHYSICIAN	Dr. Small	Rehab Potential	Fair		
PATIENT	Brown, Timothy	ROOM #	PATIENT #	MONTH & YEAR	
		354	44402	Feb 1981	

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN.
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Brown, Timothy

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NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Brown, Timothy PHYSICIAN Dr. Small MEDICAL CASE # 44402
NURSES NOTES

Module #A-9-6

CHARTING SITUATIONS

ACTIVITIES

SITUATION # 4

On February 3, 1981, you are working 3-11 and are assigned to medications. One of your patients is Mrs. Jane Woods, a 25-year-old woman with Multiple Sclerosis and a Urinary Tract Infection. When you check her after supper Mrs. Woods tells you she is tired and has not slept well recently. She would like her sleeping medication with her 8 p.m. routine medications. You check her kardex and prepare the PRN ordered. After you sign out the medication, there are 23 capsules remaining. Mrs. Woods takes her 8 p.m. medications and at 8:30 p.m. is sleeping soundly. Chart the medications you administered and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
12/20/80	Azo-gantrisin 0.5 Gm Tab T q12 h	8			8
12/20/80	Milk of Magnesia 30 c.c q.h.s				8
12/20/80	Tigan 100 mg cap T q8h prn/nausea				
12/20/80	Seconal 100 mg cap T h.s. prn/sleep				

DIAGNOSIS: Multiple Sclerosis Urinary Tract Infection			DIET: Regular
Woods, Jane	# 321	AGE: 25	DR. Hall

30 DAY MEDICATION RECORD

Feb 1981

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
12/20/80 Azo-gantrisin 0.5 gm Tab + q 12 h	8 8																	
12/20/80 Milk of Magnesia 30 cc q hs	8PM																	
12/20/80 Tigan 100 mg cap T q 8 h p.r.n for nausea	P R N																	
12/20/80 Seconal 100 mg. cap T hs p.r.n for sleep	P R N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies			
DIAGNOSIS	Multiple Sclerosis Urinary Tract Infection	Diet	Regular	
PHYSICIAN	Dr. Hall	Rehab Potential	Poor	
PATIENT	Woods, Jane	ROOM # 321	PATIENT # 99876	MONTH & YEAR Feb 1981

Module #A-9-6

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN.
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Woods, Jane

CONTROLLED SUBSTANCE RECORD

Drug Name and Strength Seconal 100 mgm caps	Patient's Name Woods Jane
Script Number 7891011	Patient's Number 99876
Physician Dr. Hall	Room Number 321

Date	Time	Rec'd	Used	Bal	Signature
1/8/81	4 pm	30	from pharmacy		Joan Adams LPN
1/8/81	9 pm		T	29	Joan Adams LPN
1/10/81	8^{30} pm		T	28	Ruth Williams QMA
1/15/81	9 pm		T	27	Joan Adams LPN
1/24/81	9 pm		T	26	Rebecca [illegible]
1/30/81	8^{30} pm		T	25	Ruth Williams QMA
1/31/81	8^{00} pm		T	24	Joan Adams LPN

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Woods, Jane PHYSICIAN Dr Hall MEDICAL CASE # 99876
NURSES NOTES

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TABLE OF DESCRIPTIVE TERMS COMMONLY USED IN CHARTING

ACTIVITIES

CONCERNING	FACTOR TO BE CHARTED	SUGGESTED TERMINOLOGY
AMOUNT	1. Large Amount	1. Profuse, Copious, Excessive
	2. Moderate Amount	2. Moderate
	3. Small Amount	3. Scanty, Slight, Small Amount
APPEARANCE	1. Thin and Undernourished	1. Emaciated
	2. Fat, greatly overweight	2. Obese
	3. Seems very sick	3. Acutely ill
	4. Not very sick	4. Not acutely ill
APPETITE	1. Loss of appetite	1. Anorexia
	2. Craving for certain foods	2. Parorexia
	3. Eats only small amounts	3. Appetite Fair
ARM	1. Shoulder to elbow	1. Upper arm
	2. Elbow to wrist	2. Lower arm
	3. Appears puffy or swollen	3. Edematous
	4. Right arm artificial	4. (R) arm Prosthesis
ATTITUDE BEHAVIOR	1. Not interested in surroundings	1. Indifferent
	2. Has "don't care" attitude	2. Apathetic
	3. Doesn't believe anything said to him	3. Suspicious, Distrustful
	4. Quarrelsome, Disagreeable	4. Belligerent, Quarrelsome
	5. Afraid, Worried	5. Anxious, Fearful, Apprehensive
	6. Sad	6. Depressed, Moody
	7. Combative, Destructive	7. Aggressive
	8. Rejects all suggestions	8. Hostile
BACK (areas)	1. Upper Back	1. Interscapular Region Shoulder area
	2. Small of back	2. Lumbar Region
	3. End of Spine	3. Sacral Region
	4. Gluteal Areas	4. Buttocks
	5. Hump Back	5. Kyphosis
	6. Sway Back	6. Lordosis
BELCH	1. Belching	1. Eructation

ACTIVITIES

CONCERNING	FACTOR TO BE CHARTED	SUGGESTED TERMINOLOGY
BREATHING	1. Act of breathing	1. Respiration
	2. Act of inhaling	2. Inspiration
	3. Act of exhaling	3. Expiration
	4. Difficult Breathing	4. Dyspnea
	5. Short period when breathing ceases	5. Apnea
	6. Inability to breath while lying down	6. Orthopnea
	7. Rapid Breathing	7. Hyperpnea
	8. Increasing Dyspnea with periods of apnea	8. Cheyne-Stokes Respiration
CONSCIOUSNESS	1. Fully conscious, aware of surroundings	1. Alert, fully conscious, oriented
	2. Only partly conscious	2. Semi-Comatose
	3. Unconscious, cannot be aroused	3. Comatose
COUGH	1. Coughs all the time	1. Continuous cough
	2. Coughing over long period of time	2. Persistent cough
	3. Coughs up material	3. Productive cough
	4. Cough that does not produce material from lungs	4. Non-productive cough
	5. Occurs in paroxysms or attacks	5. Paroxysmal cough
DEFECATION	1. Bowel movement (act of, material)	1. Defecation, feces, stool
	2. Formed, yet soft stool	2. Soft-formed stool
	3. Formed with hardened feces	3. Hard-formed stool
	4. Tinged with blood	4. Blood-tinged
	5. Looks like tar	5. tarry
DIZZINESS	1. Dizziness	1. Vertigo
EARS	1. Wax in the ears	1. Cerumen
	2. Ringing in the ears	2. Tinnitus aurium
	3. Abnormal in shape	3. Deformed
EMESIS	1. Induced by patient	1. Induced
	2. Ejected to a few feet distance	2. Projectile

ACTIVITIES

CONCERNING	FACTOR TO BE CHARTED	SUGGESTED TERMINOLOGY
EYES	1. Yellow in color	1. Jaundiced
	2. Puffy, swollen	2. Edematous
	3. Motionless, not moving	3. Fixed
	4. Unusual sensitivity to light	4. Photophobia
	5. Double Vision	5. Diplopia
	6. Abnormal protrusion of eyeball	6. Exophthalmos
	7. Sees objects indistinctly	7. Blurred Vision
FAINT	1. Fainting	1. Syncope
HEAD	1. Forehead	1. Frontal region
	2. Region over temple	2. Temporal region
	3. Back of head	3. Occipital region
	4. Base of skull	4. Basilar region
HIVES	1. Hives	1. Urticaria
	2. Itching	2. Pruritus
LEGS	1. Thigh to knee	1. Upper leg
	2. Knee to ankle	2. Lower leg
LIPS	1. Pale, colorless	1. Pale
	2. Blue in color	2. Cyanotic
	3. Presence of tiny cracks	3. Fissured, cracked
	4. Fever blisters present	4. Presence of herpes simplex
MEDICINE	1. By mouth	1. Orally
	2. By rectum	2. Rectally
	3. Breathing in	3. Inhalation
	4. Rubbing into skin	4. Inunction
	5. Under the skin	5. Subcutaneous
	6. Within the skin	6. Intradermal
	7. Within muscle	7. Intramuscular
	8. Within the vein	8. Intravenous
MEMORY	1. Loss of memory	1. Amnesia
PAIN	1. Great Pain	1. Severe
	2. Comes in seizures	2. Paroxysmal, Spasmodic, intermittent
	3. Spreads to distant area	3. Radiating
	4. Started all at once	4. Sudden onset
	5. Constant	5. Constant
	6. Crampy or sharp	6. Crampy or sharp

ACTIVITIES

CONCERNING	FACTOR TO BE CHARTED	SUGGESTED TERMINOLOGY
PARALYSIS	1. Of the muscles of the face	1. Facial
	2. Of the legs	2. Paraplegia
	3. Of one side of body	3. Hemiplegia
	4. Of a single limb	4. Monoplegia
PULSE	1. Number of beats per minute	1. Rate
	2. Rhythm	2. Regular or Irregular
	3. Slow in rate	3. Bradycardia
	4. Fast in rate	4. Tachycardia
	5. Irregularily	5. Arrhythmia
SKIN	1. Pink, hot	1. Flushed
	2. Blue in color	2. Cyanotic
	3. Very white	3. Extreme pallor, pale
	4. Shines	4. Glossy
	5. Raw surface	5. Excoriation
	6. Yellow in color	6. Jaundiced
	7. Torn	7. Lacerated
	8. Cold, moist	8. Clammy
	9. Gray in color	9. Ashen
	10. Boil	10. Furuncle
	11. Pimple	11. Papule
	12. Blister	12. Vesicle
	13. Containing colored areas	13. Pigmented
	14. Wet	14. Moist
	15. Dry	15. Dry
	16. Pinpoint area of bleeding in the skin	16. Petechia
	17. Bruise, black & blue	17. Ecchymosis
SPEECH	1. Not understandable	1. Incoherent
	2. Meaningless, wandering	2. Rambling
	3. Words run together	3. Slurring
	4. Difficulty in speaking	4. Dysphasia
	5. Unable to speak	5. Aphasia
	6. Hesitant	6. Stammering
	7. Spasmodic repetition of same syllable	7. Stuttering

ACTIVITIES

CONCERNING	FACTOR TO BE CHARTED	SUGGESTED TERMINOLOGY
THROAT	1. Difficulty in swallowing	1. Dysphagia
	2. Inability to swallow	2. Aphagia
URINATION	1. To urinate	1. Void, micturate
	2. No control over urination	2. Involuntary, Incontinent
	3. Total suppression of urine	3. Anuria
	4. Frequent voiding at night	4. Nocturia
	5. Increased amount voided	5. Polyuria
	6. Painful urination	6. Dysuria
	7. Blood in urine	7. Hematuria
	8. Scantiness of urine	8. Oliguria
	9. Stones in urine	9. Calculi
	10. Foul smell	10. Bad odor
WEIGHT	1. Overweight	1. Obese
	2. Thin, underweight	2. Emaciated
WOUNDS	1. Area rubbed bare of skin	1. Abrasion
	2. Break in skin or torn tissue	2. Laceration
	3. Penetrating wound	3. Stab or puncture wound
	4. Bruised area, with no break in skin	4. Contused
	5. Is healing	5. Is clean, dry

CHECK LIST
FOR
CHARTING MEDICATIONS

ACTIVITIES

U	S		
_____	_____	1.	Complete headings on all sheets
_____	_____	2.	Enters dates and times appropriately
_____	_____	3.	Records medication on medication record correctly for agency
_____	_____	4.	Signs all entries correctly for agency method
_____	_____	5.	Charts all stats and P.R.N.'s correctly for agency
_____	_____	6.	Charts observations before, during and after administration, according to situation
_____	_____	7.	Charts legibly and neatly (with no blank spaces)
_____	_____	8.	Uses proper descriptive terminology
_____	_____	9.	Entries are concise and clear
_____	_____	10.	Uses standard abbreviations
_____	_____	11.	Spells correctly with entries
_____	_____	12.	Correct error(s) in proper manner
_____	_____	13.	Uses pen (proper color)
_____	_____	14.	Completes charting in allotted time

U - Unsatisfactory
S - Satisfactory

FOR CHECK LIST GO TO NEXT PAGE

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Observation		
Information		
Group Discussion		
Practice		

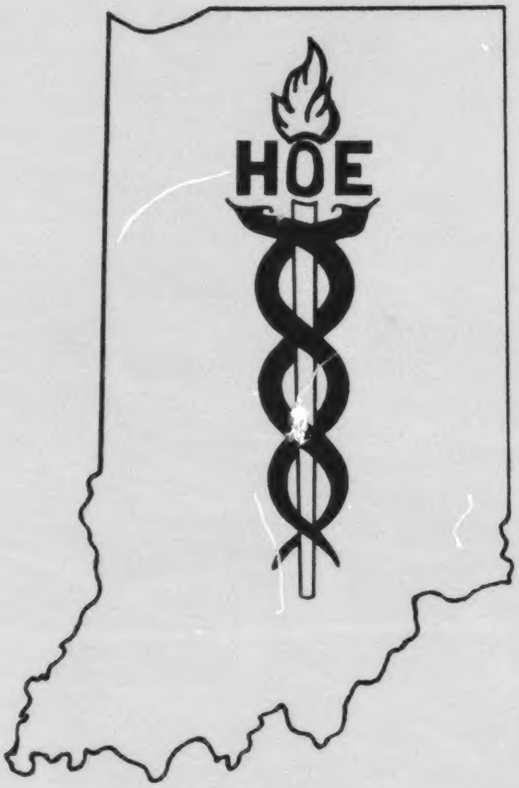
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

A - 9 - 7

LEGAL AND ETHICAL OBLIGATIONS OF MEDICATION ADMINISTRATION

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LEGAL AND ETHICAL OBLIGATIONS OF MEDICATION ADMINISTRATION

GOAL

For many patients the administration of medications is a major part of their health care. Each patient has a right to expect that those who are involved in health care will always uphold his/her rights and provide safe, efficient care. To protect patients as much as possible, laws have been passed regarding patients' rights. It is expected that medication personnel will always uphold those rights and will further conduct themselves in a manner which goes beyond patients' rights and includes actions such as honesty and dependability.

There may be occasions when medication errors occur. They may be unintentional but, unfortunately, many errors happen when haste and habit replace keen and alert action. Whatever the cause, there are legal and ethical obligations that must be upheld when medication errors occur.

This module will provide the health worker, who administers medications, with the information necessary to meet legal and ethical obligations at beginning level ability for his/her area of responsibility.

TURN TO NEXT PAGE

USE OF LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

LEGAL AND ETHICAL OBLIGATIONS OF MEDICATION ADMINISTRATION

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Modules # A-9-1 through # A-9-6
2. All pre-requisites for Modules # A-9-1 through # A-9-6

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

LEGAL AND ETHICAL OBLIGATIONS
OF MEDICATION ADMINISTRATION

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Distinguish between "reasonable care" and "duty of care" as they relate to medications
2. Recall the meaning of negligence and its probable outcome in relation to medication administration
3. Identify the three major responsibilities for all medication personnel in regard to medication errors
4. Recall the function of an incident report
5. Identify three responsibilities of medication personnel regarding automatic stop orders for medications
6. Recall three responsibilities regarding emergency medications
7. Select three medications that are frequently found in the emergency container. Identify them by name and give their method of administration and action

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Wood and Rambo's Nursing Skills for Allied Health Services, 2nd Edition, read pages 1 - 6, pages 10 - 21 and pages 655 - 656. Read the material before attending the lecture. Students are expected to take notes on their reading.

OBSERVATION AND INFORMATION:

Before going to the lecture, ask to see the policies regarding "stop orders, emergency medications" and "incident reports" where you work. Answer the questions on page 138 regarding "stop orders" and "emergency medications." Ask to see a copy of an incident report where you work. From the policies and the incident report, answer the questions on page 139.

LECTURE:

At the time designated by the teacher, attend the lecture on "Legal and Ethical Obligations of Medication Administration." An outline of this lecture may be found in this module. All students are expected to take notes during the lecture.

GROUP DISCUSSION:

Following the lecture, your teacher will lead you in a group discussion based on the questions on pages 138-139 of this module. You should be prepared to participate, based on your answers to the questions.

STUDY AND SELECTION:

Study your lecture notes, also select three emergency medications from the chart on page 146. Be able to list the names, methods of administration and actions of those medications. Be certain you can reach the objective before taking the Master Test.

CHECK LIST:

As you complete each activity, be sure to check it off on the check list.

OBSERVATION

ACTIVITIES

Before going to the lecture, ask to see the policies regarding "stop orders" and "emergency medications" in the agency where you work. Answer the following questions regarding those policies:

1. How long can Schedule II controlled medications be given until new orders must be written? ______________________________

2. Are there automatic "stop orders" for any other medications? _____
____
____

3. What are the consequences of administering medications, if the order is not valid? ______________________________
____
____

4. Who is responsible for keeping the emergency cart or container stocked and ready for use at all times? ____________________
____
____

5. Where is the emergency cart or container kept on the unit where you work? ______________________________
____
____

6. How is the patient charged for medications which are used during emergencies? ______________________________
____
____

INFORMATION

ACTIVITIES

Before going to class, look at a copy of an incident report in the agency where you work. Answer the following questions regarding the incident report:

1. When (for what reasons) is an incident report made out in the agency where you work? ______________________________
____
____
____

2. Who makes out the incident report? ______________________
____
____

3. How many copies are made of the report? ____________________

   Who signs them? ______________________________
____

4. What happens to the incident report once it is made out? ________
____
____
____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be certain to note the following:

A. Review of Legal Responsibilities For Health Care Worker

   1. Enforce patients' basic rights - patients are protected against:
      - a. libel and slander - written or spoken statement that damages reputation
      - b. invasion of privacy - violate private life and make public
      - c. assault and battery - threat or illegal touching - to do bodily injury
      - d. negligence - failure to perform in reasonable manner; not doing what ought to be done - most common

   2. Protect patient from harm
      - a. tort - wrong committed by a person against another person or his property (break patients' rights)
      - b. crime - wrong committed by a person against another person but act is public (much more serious - examples: theft, intent to kill, etc.)

B. Medication Errors - Reporting, Observation and Documentation

   1. Cause - results from
      - a. lack of concentration
      - b. lack of knowledge
      - c. inadequate communication
      - d. improper transcription of orders

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LECTURE OUTLINE

ACTIVITIES

B. Cont.

2. Outcome - violation of "five rights" - plus -
    a. the wrong medication
    b. the wrong dose
    c. the wrong time
    d. the wrong method or route of administration
    e. the wrong patient
    f. also, medication omitted

3. Major Responsibilities of Medication Personnel For Errors
    a. Reporting - must be reported to charge person immediately upon discovery; doctor will be notified - measures taken by proper people - charting must be explicit
    b. Observation
        (1) patient observed closely - effects and observations recorded
        (2) check P.D.R. for desired, side and toxic effects - also minimum and maximum dosage
        (3) be alert for - nausea, vomiting, diarrhea, difficult breathing, dizziness, itching, hives, drowsiness, restlessness, color change, pulse change, etc.
    c. Documentation
        (1) incident report - made out by person most familiar with situation - may be one who committed error - may not
        (2) incident report - made out for hospital administration not part of patient's chart - alerts agency officials to possible law suit - one copy to nursing office or other designated party

LECTURE OUTLINE

ACTIVITIES

B. 3. c. Cont.
  - (3) Usual information in incident report
    - (a) name of person who made error
    - (b) date of error
    - (c) patient's name and location
    - (d) description of error
    - (e) steps taken to correct error
    - (f) possible preventive measures
    - (g) condition of patient - before and after
    - (h) possible complications
    - (i) doctor's comments and signature
    - (j) signature of person making error, charge person, supervisor and/or Director of Nursing
  - (4) Informing the patient of error - may or may not be done - doctor's decision and task to do so

C. Automatic Stop Orders
  1. Agency policies are set for certain medications as to how long they may be given without a new order
     - a. in skilled nursing facilities all orders must be re-signed every 30 days
     - b. in intermediate care facilities all orders must be re-signed every 60 days
     - c. a facility may have a "stop order policy" for some drugs such as antibiotics and controlled substances
  2. Charge nurse usually responsible for notifying physician when re-order is needed
  3. Know the policy of your agency
  4. Be certain order is valid before administering any medication

LECTURE OUTLINE

ACTIVITIES

D. Emergency Medications and Role of Medication Personnel
   1. Emergency medications frequently injectables! Therefore, only those qualified to administer method will do so
   2. Special place for all emergency medications - cart - container, shelf. All medication personnel responsible for knowing location of emergency medications - how to obtain
   3. Emergency medications must be checked - kept in readiness at all times - might be done when Schedule II medications counted; if any used - replace immediately
   4. Confusion may occur at time of administration of emergency medications. Must be kept track of in some manner - so they can be charted and charged (sometimes paper sack taped on cart or container to place medication containers - patient's name and time placed on sack)
   5. If doctor administers emergency medication, keep containers and chart doctor gave same
   6. Have general idea of the most common emergency medications

E. Medication Personnel and Negligence
   1. Negligence - most common "patient's right" breached (broken)
   2. Patient expects safe, efficient care - trusts medication personnel
   3. Medication errors - violate trust of patient
   4. Patient protected against negligence by law - called "duty of care" - worker obligated to perform services that meet common standards

ACTIVITIES

E. Cont.

5. Worker protected - by standards - called "reasonable care" - cannot be expected to do impossible - if reasonable care not given, worker is NEGLIGENT (worker can also be negligent if "unreasonable" or unfavorable care given)

6. Responsibility for Errors

   ALL PERSONS ARE RESPONSIBLE FOR THEIR OWN ERRORS; however, consequences for negligence (law suit) usually are brought against the person with the highest training or most responsibility first. If highest person considered not responsible, action brought against person committing error.

7. Legal Action
   - a. Law suits - usually method of handling unless crime against public
   - b. Expert witness testifies to standards of care (expert witness - understands medical responsibilities)
   - c. If witness declares - intention not to harm - or injury slight - matter usually settled financially (need for liability insurance)
   - d. If patient injured severely or intent to harm proved - worker may
     - (1) lose job
     - (2) lose qualifications
     - (3) possibly be unable to practice again
   - e. If crime committed - worker may
     - (1) be imprisoned in county jail for less than one year (misdemeanor)
     - (2) be imprisoned in state prison for more than one year (felony)

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LECTURE OUTLINE

ACTIVITIES

E. Cont.

8. Guidelines To Prevent Legal Action
    - a. Be conscientious worker - act responsibly
    - b. Observe the "rights of patients"
    - c. Complete all records necessary
    - d. Do only those things which you have been trained to do

F. Ethical Considerations

1. Definition - ethics is a "code of behavior" that represents ideal conduct of group
2. Foundation of "ethical conduct" - respect of rights of others and dignity of individual
    - a. no laws involved
    - b. moral obligations
    - c. adjectives that describe ethics
        - (1) honesty
        - (2) sincerity
        - (3) loyalty
        - (4) dependability
3. Ethics Self-Test - ask yourself
    - a. how will my action or choice affect the patient?
    - b. how will my action or choice affect my employer or co-workers?
    - c. how will my action or choice affect me?
4. Unethical Behavior Outcomes
    - a. discipline of entire group or certain workers
    - b. disfavor of entire group or certain workers
    - c. guilt feelings - hard to live with self
5. Maintain ethical behavior by "doing to others as you would have them do to you - or one of yours!"

COMMON EMERGENCY MEDICATIONS

ACTIVITIES

Drug	Dosage	Action
Aminophylline	250-500 mg. I. V.	Increase heart output improve respirations
Epinephrine	0.2-1 cc. of a 1:1000 sol. S. C. or I. M.	Increase heart rate improve heart efficiency
Isuprel	0.2-1 mg I. V.	Improve respirations Stimulate heart
Valium	5-10 mg. I. V.	Stop convulsions
Thorazine	25-50 mg. I. M.	Tranquilizer - to treat severe agitation
Demerol	25-50 mg. I. M. or orally	For severe pain
Lasix	20-40 mg. I. V. or I. M	For severe edema, especially pulmonary edema
Compazine	5-10 mg. I. M. or orally	For severe nausea, vomiting, mild tranquilizer

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text		
Observation & Information		
Lecture		
Group Discussion		
Study & Selection		

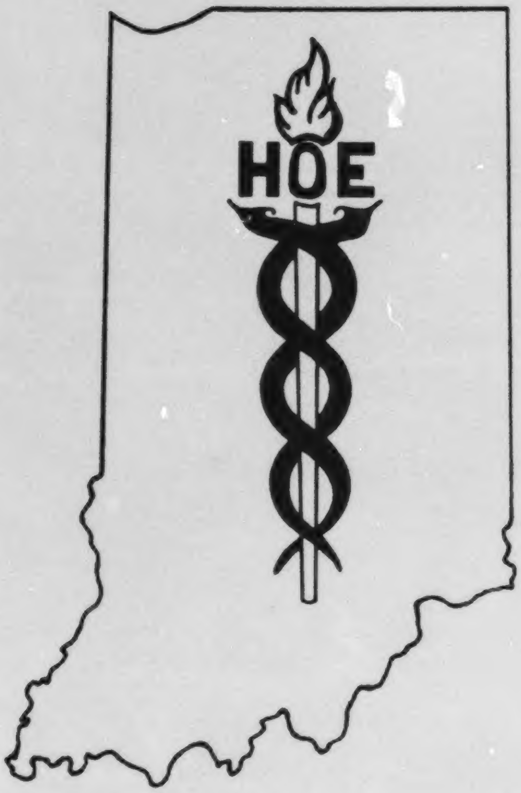
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 8

HEALTH, AGE AND BODY PROCESS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER
LINDA FITZGERALD, ASSISTANT WRITER

REVISED BY: NANCY WALTS, R.N., M.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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HEALTH, AGE AND BODY PROCESS

GOAL

Each person reacts in his own way to medications. Factors such as health, age, body size and internal functions can and do alter the effectiveness of medications. Therefore, when medications are administered, the patient, as an individual, must be considered.

Medications are wonderful tools for the care of patients of all ages, but only when their use is accompanied by wise application of knowledge. The increasing proportion of elderly individuals in the American population has raised many questions and issues about the appropriate and rational use of drugs in the geriatric age group. We know that older people, who make up 10% of the present U.S. population, consume 25% of all prescription drugs.

This module will enable the health care worker to identify the major factors that influence the effectiveness of medications. This module will also provide the health worker with a beginning level ability to relate those factors to the administration of medications.

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

HEALTH, AGE AND BODY PROCESS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Modules # A-9-1 through # A-9-7
2. All pre-requisites for Modules # A-9-1 through # A-9-7

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

HEALTH, AGE AND BODY PROCESS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. List at least ten (10) over-all factors that may alter the effectiveness of medications
2. Recall that part of the body where most oral medications are absorbed
3. Recognize the reasons for giving some medications between meals and some with food
4. Recognize the routes by which medications are eliminated from the body, including the main route
5. Indicate which of the selected altered body states influence absorption, distribution, metabolism or excretion of medications.

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Factors About Medications That Influence Effectiveness
  1. dosage
     the amount of medication the doctor has ordered
  2. frequency
     a. how often the patient receives the medication
     b. some medications stay in the body longer than others
  3. route of administration
     a. I. V. medications are absorbed faster and more completely
     b. oral medications absorb more slowly
  4. medication combinations
     (review effects of two or more medications)

B. External Factors That Influence Effectiveness
  1. food
     a. oral medications absorb more quickly if stomach is empty
     b. some medications must be given with food
     c. some foods interfere with the absorption of some drugs, such as milk with tetracyclines
  2. fluid
     a. fluids should be given with most drugs
     b. exceptions are antacids and some cough preparations
  3. environmental temperature
     medication may be distributed more rapidly when the patient is warm, blood vessels are dilated
  4. human and social factors
     self medication errors frequently occur
  5. cost
     patients may omit doses of medication to save money

ACTIVITIES

C. Individual Factors That Influence Medication Effectiveness

1. General body factors
    a. age
        very young and elderly are easily affected by medications
        dosage must be watched carefully
    b. size
        for many medications, dosage is determined by body weight
        rapid weight loss or gain can change effectiveness
    c. sex
        usually about the same, some medications affect women faster, such as pain medications
    d. activity
        body more sensitive to medications effects during maximum activity, least during sleep. For patients with little activity medication should be kept at a minimum

2. State of health
    a. acute illness
        sudden onset of illness, such as heart attack, severe injury, can alter effectiveness rapidly
    b. pain
        whether sudden or continuous, pain makes the body resistive to medications
    c. chronic illness
        certain body conditions, such as diabetes, heart failure, kidney disease, can change medication effectiveness drastically
    d. emotional state
        factors such as worry, fear, jealousy, and sorrow can all affect medication effectiveness

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LECTURE OUTLINE

ACTIVITIES

D. Factors Affecting Systemic Action Events

1. Absorption of oral medications
    - a. altered by vomiting, diarrhea, diseases of the stomach and intestines
    - b. also affected by presence of food in the stomach, physical activity, and form of medication (solid or liquid)

2. Distribution
    - a. altered by diseases of the heart and blood vessels, such as hemorrhage, heart failure, arteriosclerosis (hardening of the arteries), edema (swelling).
    - b. also altered by diseases affecting blood cells, such as anemia

3. Metabolism
    - a. altered by fever, infection, and dehydration
    - b. also altered by diseases such as diabetes, cancer and liver disease

4. Excretion
    - a. diseases of the kidney such as nephritis or kidney failure alter excretion by the kidney
    - b. also lung diseases, such as emphysema, alter excretion by the lung

SITUATION STUDY

ACTIVITIES

Read through the following situations carefully. When you have completed your reading, follow the instructions regarding related questions.

SITUATION # 1

Mr. N. A. was a 79-year-old male who had been on oral medication for Diabetes for 10 years. He was a widower and lived by himself in the house he and his family had occupied for over 50 years. He was still fairly active and liked to work outside with his flowers and small garden. One afternoon in mid-spring, while working in his garden, he fell and fractured a hip. He was unable to move. He cried for help repeatedly but his close neighbors were gone. He lay outside over night and was not found until about 7:00 a.m. the following morning when his neighbor was getting ready to leave for work. By the time the ambulance was called and he arrived at the hospital, it was almost 9:30 a.m. before he was seen by a doctor and treatment begun.

SITUATION # 2

Ms. C. P. was a 45-year-old female who had been diagnosed as having Muscular Dystrophy when she was 14. Over the years she had slowly lost her ability to walk and had been confined to a wheel chair since she was 30 years old; however, she participated in many activities while confined to her wheel chair daily. She stayed with her parents until two years ago when they could no longer assist her in and out of the wheel chair (her average weight was 150 pounds). She moved to the nursing home closest to her parents when she left home. Several months ago her doctor informed her that her mother must move to a warmer climate for her health. Ms. C. P. became very concerned about her mother's health and her parents possible move. Personnel at the home noted that she has not been eating well, weighed 115 pounds, stayed in bed a great deal and

SITUATION STUDY

ACTIVITIES

SITUATION # 2 Cont.
required frequent pain medication for stomach distress. Yesterday she awoke at 6:30 a.m. vomiting. She vomited three times by 10:30 a.m. At 10:45 a.m. her light went on and the nurse answered it. Ms. C. P. had vomited what appeared to be 2 cups or more of bright red blood. Fortunately her doctor was in the building, came immediately, and treatment was begun within 10 minutes.

QUESTIONS: In the space provided below, list all the factors that you can find in each situation that might influence the effectiveness of any medications administered to either person. Use your lecture notes to assist you.

SITUATION # 1	SITUATION # 2
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

What have you learned from this activity regarding the role the body and its state of health plays in the effectiveness of medications? ________

____

____

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Review		
Lecture		
Situation Study		
Group Discussion		
Study		

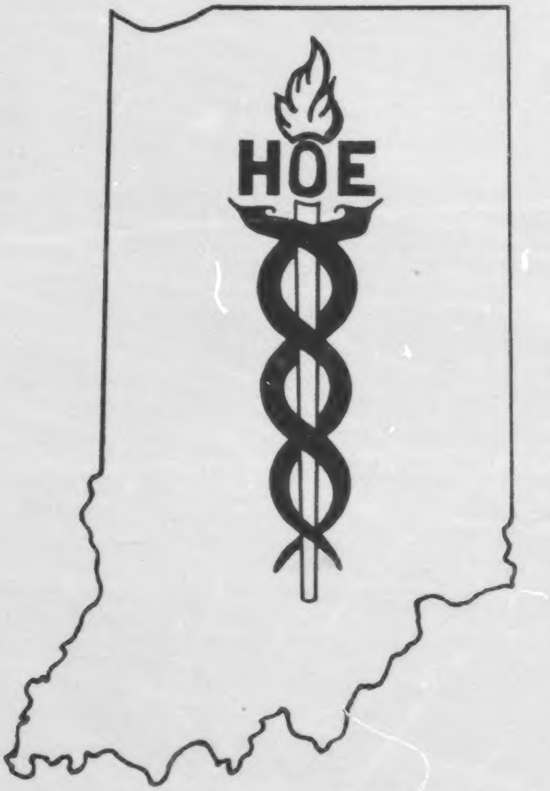
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

A - 9 - 9

CARE OF THE AGED & LONG TERM PATIENTS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER
LINDA FITZGERALD, ASSISTANT WRITER

REVISED BY: NANCY WALTS, R.N., M.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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CARE OF THE AGED & LONG TERM PATIENTS

GOAL

Frequently the aging process as well as long term illness can bring change to the body. All the major organs such as the heart, kidneys, lungs and liver decrease in their ability to work. Decreased functioning usually means a need for medications. A decrease in function with an addition of medication may cause a conflict; aging persons may not get the proper effectiveness from the needed medication. Medication personnel must be aware of this conflict and always watch for it.

This module will enable the health care worker, who administers medications, to determine the needs of the aging person as well as the special needs of long term care patients. This module will also enable the health care worker to understand nursing responsibilities in the administration of medication to the aged.

TURN TO THE NEXT PAGE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

CARE OF THE AGED & LONG TERM PATIENTS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Modules # A-9-1 through # A-9-8
2. All pre-requisites for Modules # A-9-1 through # A-9-8

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

CARE OF THE AGED & LONG TERM PATIENTS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Identify the major physical changes that occur with aging and how each change influences the effectiveness of medications
2. Recall the general needs and nursing care of the aged individual
3. Recall the special needs of long term care patients and ways these needs can be met
4. Identify the major nursing responsibilities to the aged and long term patients when administering medications

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

SIMULATION:

Before the lecture, turn to the "Simulations" on page 168 . Select one, follow the instructions and then answer the questions.

REVIEW:

Before the lecture, review Module # A-9-2 "Principles of Medication Therapy," sections on actions and effects of medications.

LECTURE:

At the time designated by your teacher, attend the lecture on "Care of the Aged and Long Term Patient." An outline of the lecture can be found in this module. All students are expected to take notes during the lecture.

GROUP DISCUSSION:

Following the lecture your teacher will lead you in a group discussion based on the questions you answer on page 169 . Be prepared to participate in the discussion.

STUDY:

In preparation for the Master Test, study the lecture outline and your notes. Be sure you can reach the objective before you take the Master Test.

CHECK LIST:

As you complete each activity, check it off on the check list.

SIMULATIONS

"PUT YOURSELF IN THEIR PLACE"

ACTIVITIES

Below, you will find a list of seven different possible handicaps an elderly or long term patient might be bothered with. Examine the list carefully. Have you ever wondered what it would be like to have one of these problems?

Select one of them and follow the instructions given beside it in your own home. When you have simulated the handicap for a period of not less than two hours. discontinue your simulation and answer the questions on the next page.

1. visual problems - take a pair of swim goggles or old glasses and Saran Wrap. Crinkle the Saran Wrap and wrap it over the swim goggles. Go about your daily chores. Do as many things around the house as possible; read; watch television; walk around. When finished, answer the questions on page 169 .
2. arthritis - wrap your knees and elbows with ace bandages when getting up in the morning. Go about getting dressed, working around the house, walking, moving, eating, etc. Try to do as many different activities as possible. When finished, answer the questions on page 169 .
3. hearing loss - place cotton balls in your ears or place ear muffs over your ears. Attempt to carry on a conversation with someone face to face and then over the telephone; listen to the radio; watch television; if you are very brave, go to a store and do some shopping. When finished, answer the questions on page 169 .
4. loss of touch - cover your hands with sandwich wrap or rubber cement (let it dry). Attempt to do activities that require touch such as, thread a needle; tie your shoes; play the piano; write; peel potatoes; sew; work with small tools, etc. When finished answer the questions on page 169 .

ACTIVITIES

SIMULATIONS - Cont.

5. stroke or paralysis - select your dominant side. Keep your arm to your side at all times - do not use it for anything. Take a yard stick or board and tie it in 2-3 places on the outside of the leg on that same side. Attempt to do daily activities. Writing, eating, walking up stairs, going to bathroom, etc. When finished, answer questions below.

6. speech problems - place a ping pong ball or small rubber ball in your mouth. Carry on as many conversations as you can with different words. Try using the telephone. If brave go to a small store and try to do shopping. When finished, answer questions below.

7. loss of smell - take a kleenex, tear it in half and gently push one piece into each nostril. Prepare your favorite meal or snack and eat it. Smell your favorite flowers, perfume, etc. when finished, answer questions below.

ANSWER THE FOLLOWING QUESTIONS:

1. Did you complete the 2 hour time limit? _____ Go beyond it? _____

2. What feelings did you have while simulating the handicap? __________

____

____

3. Were you surprised by the feelings you had? _____ If so, how? ______

____

____

4. Has this experience given you any different feelings toward the elderly or long term patient? ______________________________

____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Definition of Terms
   1. Aged - Old usually refers to those persons over seventy-five
   2. Geriatrics - care of the elderly or aged
   3. Long Term Care - nursing care given to patients who require continuous supervision of health status. Emphasis is on maintaining maximum independence. May be young persons; not always geriatric.
   4. Physiology - study of the way body structures or organs function

B. Physiology of the Aged
   1. Aging is a gradual process which starts at birth and takes place until death - individual rate of speed
   2. Changes in body structures or organs due to change in tissues and cells - causes slowing down of functions.
   3. Changes by Body Systems
      a. Nervous System & Sensory Organs (nerves, brain, spinal cord, organs of sensation)
         (1) hearing impairment - difficult to communicate
         (2) decrease in sense of smell and function of taste buds - causes loss of appetite
         (3) Decrease in visual sharpness and ability to adjust to light change - causes falls and many accidents
         (4) Decrease in sensation of touch and pain - can lead to injuries and illnesses going untreated
         (5) decrease in nerve action to blood vessels - can alter distribution, absorption and elimination of medications

LECTURE OUTLINE

ACTIVITIES

B. 3. Cont.

- b. Musculoskeletal System (bones and muscles)
    - (1) muscles lose strength, size, tone - decreases strength and endurance
    - (2) joints, bones, ligaments, tendons, undergo changes - result in stooped posture and limited mobility
    - (3) inactivity may interfere with distribution of medications
- c. Respiratory System (nose, throat, voice box, windpipe, bronchi and lungs)
    - (1) decreased give and take of lungs and chest muscles
    - (2) decreased function - exchange of oxygen and carbon dioxide
    - (3) improper balance of oxygen and lack of chest action may interfere with metabolism and elimination of medications
- d. Urinary System (kidneys, ureters, bladder, urethra)
    - (1) decreased kidney function
    - (2) can cause edema of lower extremities and collection of wastes
    - (3) may drastically interfere with elimination of medications
- e. Cardiovascular System (heart, blood vessels, blood, lymphatics, spleen)
    - (1) decreased cardiac output
    - (2) causes lessened physical activity, edema in chest and/or legs
    - (3) decreased circulation of blood may cause poor distribution of medication

LECTURE OUTLINE

ACTIVITIES

B. 3. Cont.

- f. Digestive System (mouth, throat, esophagus, stomach, intestines, liver, pancreas)
  - (1) decreased digestion and absorption of food - intolerance to many foods - nausea, loss of appetite
  - (2) may cause poor absorption of medication
- g. Endocrine System (Pituitary, Pineal, Thyroid, Para-Thyroid, Islets of Langerhans, Adrenals, Ovaries and Testicles)
  - (1) decrease in hormone secretion
  - (2) can produce changes in many areas of body - tendency toward Diabetes, water retention, sex characteristics, withering of parts, poor metabolism
  - (3) poor metabolism can affect medication action
- h. Integumentary System (skin)
  - (1) loss of fatty tissue causes sagging and wrinkling
  - (2) oil glands less active - allows skin to be dry and scaly
  - (3) decreases effectiveness of topical medication absorption and elimination of some medications

C. Needs and Nursing Care of Aging - Needs are Progressive

1. Needs - all human beings, regardless of age, have the same basic needs
   - a. basic physical needs - food, fluid, clothing, shelter, activity, rest, elimination, sexual expression
   - b. safety and security - health, protection from injury, ability to help self - own territory or space
   - c. love and belonging - approval, understanding, acceptance
   - d. self-esteem - identity, coping, self-growth, adequacy
   - e. self-realization - accomplishment, purpose, values, hope, meaning

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LECTURE OUTLINE

ACTIVITIES

C. Cont.

2. Importance of needs

physical needs most basic - ones usually tended to first in nursing - follow in sequence up - all need to be met to be happy and satisfied person - when self-realization attained, other needs not so important. See illustration

Self-realizatiion	Sustaining relationships
Self-esteem	Satisfying use of time Having direction Venting feelings without shame Making decisions
Love and belonging	Having new experiences and learning Meeting spiritual needs Passing wisdom to young
Safety and Security	Health Protection from injury Ability to help self Own territory or space
Basic physical needs	Food and Fluid Clothing Shelter Activity Rest Elimination Sexual expression
BASIC HUMAN NEEDS	PARTICULAR NEEDS OF THE ELDERLY

A chart of basic human needs

Illustration taken from Conahan, J.M., Helping Your Elderly Patients: A Guide for Nursing Assistants, The Tiresias Press, Inc., New York City, p. 25, 1976 (ISBN: 0-913292-29-X)

LECTURE OUTLINE

ACTIVITIES

D. Nursing Care of the Elderly
  1. Major thrust of nursing care should be to assist aging person to
    a. meet basic needs
    b. keep patient as independent as possible
  2. Types of nursing care
    a. general hygiene as it relates to
      (1) clothing
      (2) oral care
      (3) bathing
      (4) hair and facial care
    b. pressure sores (prevention and care)
      (1) frequent turning (exercise if possible)
      (2) dry bedding (free from wrinkles and crumbs)
      (3) padding, cushions, etc.
      (4) special devices - air mattress, water beds
      (5) massage of reddened areas
    c. diet modifications
      (1) allowable food
      (2) patient likes
      (3) chewing problems
      (4) special foods
      (5) frequent and small feedings best
    d. safety
      (1) good lighting
      (2) equipment to steady
      (3) uncluttered walking areas
      (4) protection from falls, burns, etc.
      (5) care with transporting
      (6) securing with restraints only when ordered
    e. T. L. C. - as much as possible
    f. medication needs - (see F. of this module)

LECTURE OUTLINE

ACTIVITIES

E. Special Needs of Long Term Patient
  1. Many times *not* aged
  2. Circumstances change normal progress pattern
    a. accidents
    b. handicapping disease (diabetes, blindness, deafness, etc.)
    c. crippling disease (multiple sclerosis, muscular dystrophy, cerebral palsy, etc.)
    d. loss of mental capabilities (mentally ill, mentally deficient)
    e. fatal illnesses (cancers, etc.)
  3. Special Needs
    a. frustration in trying to cope with condition - hard for health worker to understand
    b. unable to achieve own physical needs
    c. unable to have much independence
    d. always must "share" space with someone
    e. many worries
    f. hospital or agency may be "substitute home"
    g. health workers may be "substitute family"
    h. hard to find identity
    i. hard to achieve
    j. *most* difficult to have hope
  4. Ways needs can be met
    a. main way - *health care worker's attitude* - accept patient as a person
    b. empathy - not sympathy
    c. listen, be patient, persevere
    d. stimulate interest
    e. realize importance of "order" in their lives
    f. be aware of limitations - but permit independence
    g. allow as much *dignity* as possible
    h. allow as much privacy as possible

ACTIVITIES

F. Administering Medications to the Aged and Long Term Patient

1. Incorporate "five rights" of administration (see Module # A-9-5) CAUTION: confusion or poor hearing may cause elderly person to answer to any name
2. Raise head of bed or assist patient to sitting position - assist with swallowing and prevent choking
3. Give liquids before medication and after for easy swallowing (elderly - tendency to dry mouth)
4. Give medications one at a time - make sure each is swallowed (pull lower jaw down gently to see, if necessary)
5. Give patients liquids from straw, feeding cup or tube - especially if unable to sit up
6. Give most important medication first - in case patient unable or unwilling to swallow all medications. Example: heart medicine more important than vitamins
7. Place tablet or capsule well back on tongue if patient unable to take on his own
8. Allow sufficient time for patient to rest between each medication
9. For patient who has difficulty swallowing tablet or capsule - may crush, dissolve, or mix with food (Be sure action of drug will not be altered). Foods could include applesauce, applebutter, jelly, ice cream.
10. Liquids may taste better in juice or milk (if able to be mixed)

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LECTURE OUTLINE

ACTIVITIES

F. Cont.

11. For extreme difficulty in swallowing - doctor may change order to liquids - report such problems to your charge nurse
12. NEVER leave medicine at bedside - unless direct order from doctor (if patient leaves agency on pass - may have to take medications along - Must Be In Marked Container.)
13. Smaller doses of medication usually ordered for elderly as compared to younger adult
14. Careful observation of elderly - increased likelihood of side-effects
15. Absorption, distribution, metabolism and elimination may all be affected due to decreased functioning
16. HAVE PATIENCE And TAKE YOUR TIME when administering medications - haste makes for errors

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Simulation		
Review		
Lecture		
Group Discussion		

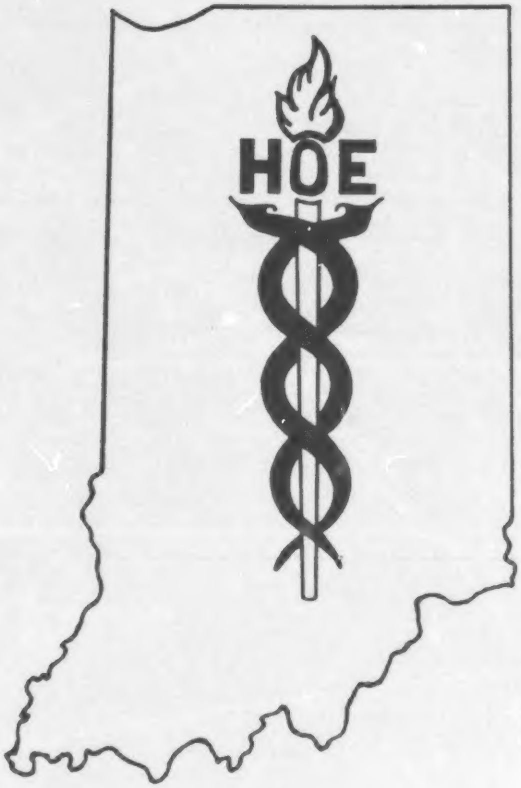
Instructor's Signature ______________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

A - 9 - 10

HANDLING OF MEDICATIONS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER
LINDA FITZGERALD, ASSISTANT WRITER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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HANDLING OF MEDICATIONS

GOAL

The proper maintenance, storage and handling of medications play a part in influencing medication administration. The exact location, size and methods used for maintaining and storing medications may differ from one agency to another, but there are basic rules and methods that apply for every agency. If medications are not properly maintained, patients could receive medications that would not have the expected effectiveness. The health care worker who administers medications must understand the basic rules and methods of storage and maintenance in order to help keep medications safe and at proper strength and purity.

This module will provide medication personnel with the information needed to store and maintain the majority of standard medications currently administered to patients.

TURN TO NEXT PAGE

HANDLING OF MEDICATIONS

USE OF LEARNING MODULES

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Principles of Medical Asepsis
2. Handwashing Techniques
3. Modules # A-9-1 through # A-9-9
2. All pre-requisites for Modules # A-9-1 through # A-9-9

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have _not_ completed these areas of study

SEE YOUR TEACHER

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HANDLING OF MEDICATIONS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Identify the proper storage place on a clinical unit, for selected types of medications
2. Recognize the key points regarding maintenance of medications
3. Recall the importance of using aseptic (clean) technique in medication preparation and identify the principles involved
4. Classify the health care workers' responsibilities in ordering, receiving and disposing of medications and in maintaining the storage areas

FOR STUDENT ACTIVITIES GO ON TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEST:

From Skelley's Medications and Mathematics for the Nurse you are to read page 66 and pg. 74. All students are expected to make notations on their reading.

OBSERVATION:

Before attending the lecture on "Handling of Medications" arrange with your superior at the agency where you work to look at the medicine area. Make observations and draw a floor diagram following the instructions given on page 185.

LECTURE:

At the time designated by the teacher, attend the lecture on "Handling of Medications." An outline of the lecture can be found in this module. All students are expected to take notes during the lecture.

DEMONSTRATION:

Following the lecture, your teacher will introduce you to the medication facilities in the school laboratory. Your teacher will also demonstrate the aseptic (clean) technique used in storing medications and maintaining the medication area.

GROUP DISCUSSION:

After the demonstration, turn to the questions listed on page 190. Each question will be discussed with everyone participating in the discussion.

STUDY:

In preparation for the Master Test, study your lecture notes thoroughly. Make certain you can reach the objective.

CHECK LIST:

Complete the check list.

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OBSERVATION

ACTIVITIES

1. In the space provided below, draw a floor plan of the medication area in the facility where you work. Show storage areas, medication areas, refrigeration facilities, locked facilities for Schedule II controlled medications, sink or water areas, entrance and exit areas and where or how the medicine area can be locked.

MEDICATION AREA

2. List the supplies and equipment available in the medication area:

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Storage of Medications - Storage Areas and Types of Medications
    1. Medicine cabinet or cart (if not in room that can be locked - will have lock on it)
        a. medications for a given area (certain number of rooms - specific department, etc.)
        b. medications stored there include - tablets, capsules, ointments, liquids that will not spoil at room temperature
    2. Refrigerator
        a. usage - to prevent spoilage - taste of oily substances less distasteful when swallowed cold
        b. medications stored there - insulin, most suppositories, liquid antibiotics, oily substances, hormone products
    3. Locked box or compartment (an inner locked area - in addition to room, cabinet or cart)
        a. Schedule II controlled substances must be there
        b. Schedule III controlled substances might be there (depends on agency)
    4. Emergency cart or tray
        a. medications used in emergency situations (most IM or IV)
        b. usually has special lock
        c. any medication personnel may have to obtain - only qualified personnel administer parenteral medications

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ACTIVITIES

B. Maintenance of Medications - Key Points
  1. Medications should be stored in area not freely accessible to the public
  2. Always lock medication room and/or cabinets when not in use
  3. Check expiration date on medications; if expired, take to your charge nurse in proper manner for agency
  4. Make certain all bottles are securely capped - prevents spilling and chemical changes that can occur when medications exposed to air
  5. Keep medications in dark if required (some may have dark bottles) to prevent deterioration from light
  6. Discard or return to pharmacy any medication which shows change in consistency, odor or color (according to manner for agency)
  7. If medication container not clearly labeled - RETURN TO PHARMACY (according to manner for agency)
  8. NEVER use any medication which is not labeled - NEVER make label changes yourself - tell your charge nurse

(3 - 8 should be watched carefully to prevent change in medication effectiveness)

C. Aseptic (Clean) Technique in Medication Maintenance
  1. Review medical (clean) asepsis
  2. General principles of medical asepsis
    a. clean to clean; dirty to dirty
    b. prevent spread of microorganisms (germs)

ACTIVITIES

C. Cont.
   3. Handwashing - mainstay of maintaining and preparing medications (review technique if necessary)
   4. Area where medications are stored must always be clean - cleaning of cabinets, countertops, etc. done by medication personnel not housekeeping
   5. Containers for medication must be kept clean (wet cloth should be present when preparing, storing, etc.)
   6. Medication area and equipment used for administration should be cleaned at least once a day - more often if needed
   7. Only the outside of medication container should be touched to avoid contamination of medication on inside (method of preparing and administering will be in Module # A-9-23 and # A-9-24)

D. Ordering, Receiving and Disposing of Medications
   1. Ordering
      a. record of medications needed to be refilled should be kept by all medication personnel when preparing medications
      b. medications usually ordered from pharmacy by charge nurse or ward clerk. Check the policy in your agency.
   2. Receiving
      a. medications must be signed for, checked against the list of medications ordered, and put away properly by the assigned person.
      b. medication aide should notify charge nurse of medication arrival

LECTURE OUTLINE

ACTIVITIES

D. Cont.

3. Disposing of medications
   a. if medication is expired it should not be given to the patient. Take it to the charge nurse. Your agency policy will determine the action she takes.
   b. wasted medication (contaminated or refused by patient) whoever prepares and administers medications should dispose of those wasted (see modules 23 and 24)
   c. discontinued medication remove immediately from patient's drug supply to prevent error. Give it to the charge nurse. It will be returned to the pharmacy for credit (if possible) or destroyed by the charge nurse
   d. patient discharged
      1. medication may be sent home with patient if ordered by physician
      2. medication may be returned to pharmacy for credit if unopened
      3. medication may be destroyed

E. Check on your facility policy for:

1. Ordering medications
2. Receiving medications
3. Disposing of medications

F. Laboratory

1. Observe set-up of medication area in laboratory
2. Observe teacher demonstration on aseptic technique for storing and maintaining medications in the medication area

GROUP DISCUSSION

ACTIVITIES

Turn to page 185 of this module and review the diagram you drew of the medication area for the facility where you work; also review the list of supplies and equipment available in the medication area.

1. Does your agency (facility) meet the storage specifactions, according to what you learned in the lecture?
2. From observations you have made while working in your agency, does the medication personnel maintain medications according to what you learned in the lecture?
3. Are there any improvements you might suggest for your agency that would help either the medication storage area or the manner in which personnel maintain the storage area?

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Observation		
Lecture		
Demonstration		
Group Discussion		
Study		

Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

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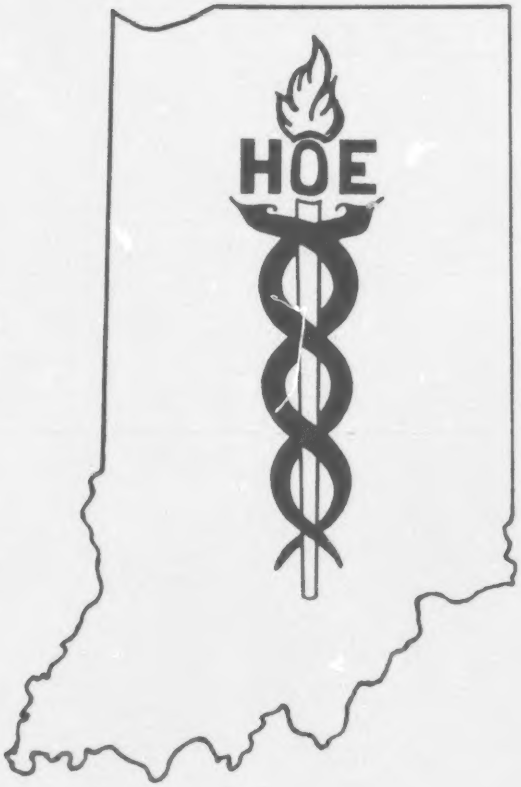
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 11

MEDICATIONS FOR THE MUSCULOSKELETAL SYSTEM

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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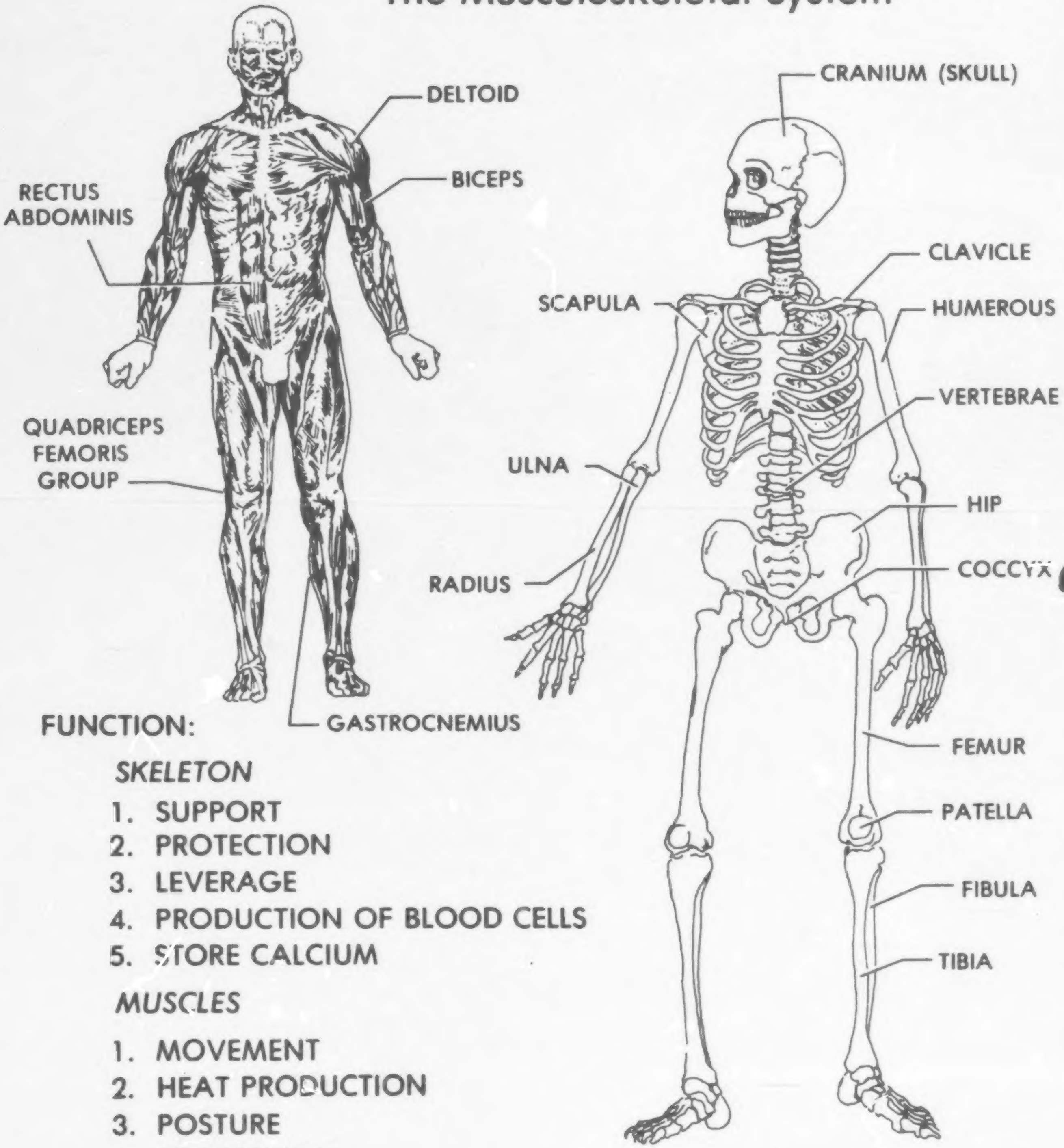
The Musculoskeletal System


DELTOID
BICEPS
RECTUS ABDOMINIS
QUADRICEPS FEMORIS GROUP
GASTROCNEMIUS
CRANIUM (SKULL)
CLAVICLE
SCAPULA
HUMEROUS
VERTEBRAE
ULNA
HIP
COCCYX
RADIUS
FEMUR
PATELLA
FIBULA
TIBIA

FUNCTION:

SKELETON

1. SUPPORT
2. PROTECTION
3. LEVERAGE
4. PRODUCTION OF BLOOD CELLS
5. STORE CALCIUM

MUSCLES

1. MOVEMENT
2. HEAT PRODUCTION
3. POSTURE
4. PROTECTION

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MEDICATIONS FOR THE MUSCULOSKELETAL SYSTEM

GOAL

The Musculoskeletal system contains the structures (muscles and bones) that enable people to move. Muscles and bones also provide support and protection for internal organs and give shape to the body. Injury, disease and the aging process all make it necessary for people to have medications ordered specifically for the treatment of muscle and/or bone problems.

Personnel administering medications for muscles and bones should understand how these structures work; what common medications are ordered for muscles and bones; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medication for the musculoskeletal system.

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR THE MUSCULOSKELETAL SYSTEM

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Structure and Function of the Musculoskeletal System
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules listed above

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATIONS FOR THE MUSCULOSKELETAL SYSTEM

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recall the four major functions of the musculoskeletal system
2. Recognize five common diseases/ailments of the musculoskeletal system in which medications are helpful
3. Identify the three classifications of musculoskeletal system medications and how administered with one example of each
4. Select five medications (at least two should be from the analgesic classification, one muscle relaxant, one anti-inflammatory corticosteroid) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO ON TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics for the Nurse you are to read page 228 - 232, stopping at "Suggested Activities" on page 232. You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for the musculoskeletal system (try to find medications from the different classifications listed in your text if possible.) From your study try to find out (1) the reason for the medication, (2) how long the patient has been on the medication, (3) the effectiveness of the medication (favorable and unfavorable.) Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Musculoskeletal System." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. Taking notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text select five (at least 2 from the analgesic group and 2 from the steroid group). Memorize the classification, trade name, chief action, method(s) of administration, and side and or toxic effects for each of the five medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work, who are receiving some type of medication(s) for the musculoskeletal system (try to find medications from the different classifications listed in your text if possible.) Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

MUSCULOSKELETAL MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications for musculoskeletal medications? ___

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________________
____
____
____

CHART STUDY

ACTIVITIES

QUESTION Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________
____

Why do you think this is so? ______________________________
____
____

4. Were there any particular side-effects that seemed common to a given classification of the musculoskeletal medications? _____ If so, what were they? ____
____
____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture be sure to note the following:

A. Review of Structure and Function of the Musculoskeletal System

  1. Structure of Skeletal System
    a. consists of 206 bones called skeleton
    b. skeleton - 2 main parts
      (1) framework of head and trunk
      (2) framework of arms and legs
    c. bones join together at areas called joints
      (1) joints that move freely (elbow, knees)
      (2) joints that move only slightly or not at all (pelvis, skull)
    d. bones are living tissue - contain lot of calcium - makes them firm - gives body support
  2. Structure of Muscular System
    a. consists of 300-500 muscles
    b. attached to bones by tendons
    c. meaty consistency
    d. muscles are able to stretch out or become thick - controlled by nerves
    e. muscles allow us to smile, lift, dance, breath, run, skip, eat, etc.
  3. Function of Bones and Muscles Together
    a. gives us movement
    b. gives support to body
    c. protects all internal organs
    d. gives our bodies their shape

LECTURE OUTLINE

ACTIVITIES

B. Major Musculoskeletal Conditions For Which Medication Is The Treatment

1. Fractures - broken bones - one of most common bone conditions
    a. many types of fractures - depends on what happens to bone
    b. fracture usually caused by fall or sudden blow to bone
    c. symptoms of fractures include pain, possible swelling, possible discoloration of part, abnormal position or movement
    d. elderly very prone to fractures - bones frequently "brittle"

2. Osteoporous - fairly common bone condition in elderly
    a. bones very brittle
    b. causes bones to break easily

3. Arthritis - inflammation (irritation and swelling) of the movable joints - with pain and stiffness - two main types
    a. rheumatoid arthritis - starts in young 25-40 yr. old - much swelling - eventually severe crippling - cause unknown
    b. osteo arthritis - usually occurs in older people - usually affects weight bearing joints

4. Muscle Spasm - condition of the muscles in which there is a sudden and violent tightening of the muscle
    a. can be caused from sudden overworking of muscle
    b. can be caused by poor circulation

ACTIVITIES

B. Cont.
  5. Muscle Strain - condition in which muscle is stretched
    a. caused by injury or overwork
    b. usually painful, especially with movement
C. Classification of Medications used for Musculoskeletal Conditions
  1. Analgesics - relieve musculoskeletal pain
  2. Muscle Relaxants - help muscle tissue relax and be less tense and painful
  3. Anti-inflammatory Medications - reduce symptoms of inflammation (heat, redness, swelling, pain)
D. Selected Medications by Classification
  1. Analgesics relieve pain, especially effective for muscle joint and bone pain
    a. may also relieve swelling
    b. most given orally, 2-4 times a day because they have a short action
    c. side effects - stomach discomfort very common, also dizziness, headache
    d. examples
      (1) aspirin (Bufferin, Empirin) oral, very effective for arthritis pain
      (2) ibuprofen (Motrin) Oral
      (3) fenoprofen (Nalfon) Oral
      (4) sulindac (Clinoril) Oral
    e. topical analgesics - applied to skin for muscle pain relief
      (1) Aspercreme - contains aspirin
      (2) Icy Hot - liniment, relieves muscle and joint pain

LECTURE OUTLINE

ACTIVITIES

D. Cont.
  2. Muscle Relaxants - relieve muscle spasm
    a. especially useful following muscle injury or strain
    b. given orally
    c. side effects - drowsiness, headache
    d. examples
      (1) carisoprodol (Soma)
      (2) methocarbamol (Robaxin, Delaxin)
      (3) Parafon Forte - combination of muscle relaxant and analgesic
  3. Anti-inflammatory Medications - reduce symptoms of inflammation
    a. Corticosteroids
      (1) helpful in arthritis, allergic conditions
      (2) used carefully, may mask infection
      (3) side effects - dizziness, headache, watch carefully for signs of fluid retention, i.e., moon face, weight gain
      (4) examples
        prednisone (Deltasone)
        dexamethasone (Decadron)
        cortisone (Cortone)
    b. Others
      (1) Indomethacin (Indocin) relieves symptoms of inflammation, also analgesic effect in arthritis. Side effects - stomach upset, confusion, depression
      (2) phenylbutazone (Butazolidin)
        also analgesic effect in arthritis
        side effects - nausea, vomiting, confusion

E. Long Term Medication for Musculoskeletal Diseases
  1. analgesics, anti-inflammatory drugs sometimes given for months or years
  2. side effects can be very severe - patient should be watched carefully

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

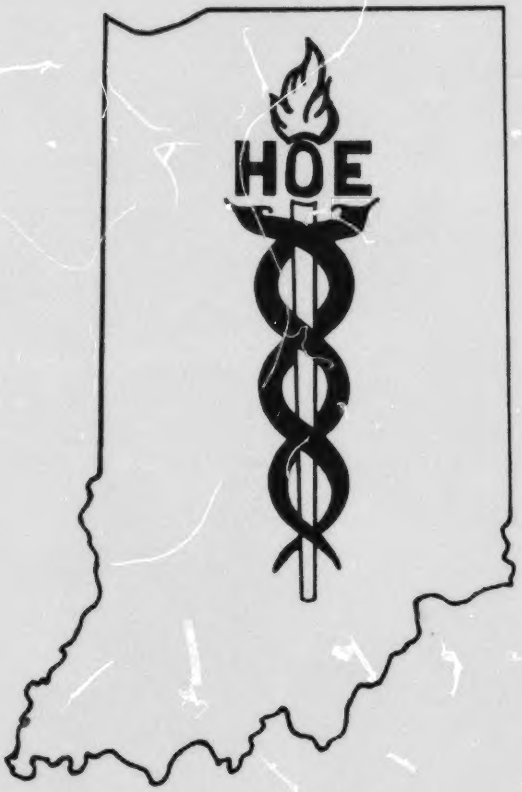
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 12

MEDICATIONS FOR THE NERVOUS AND SENSORY SYSTEMS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

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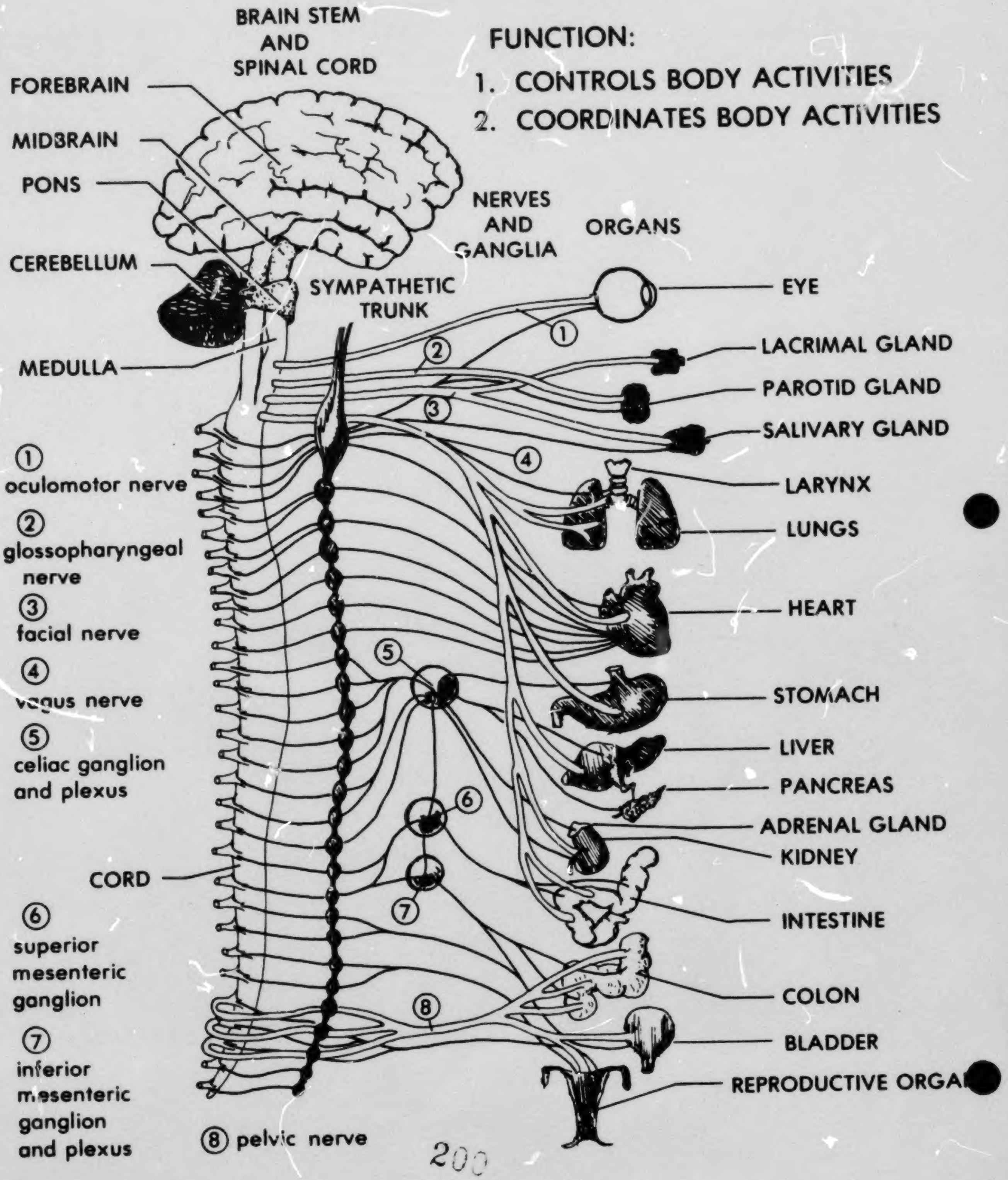
The Nervous System

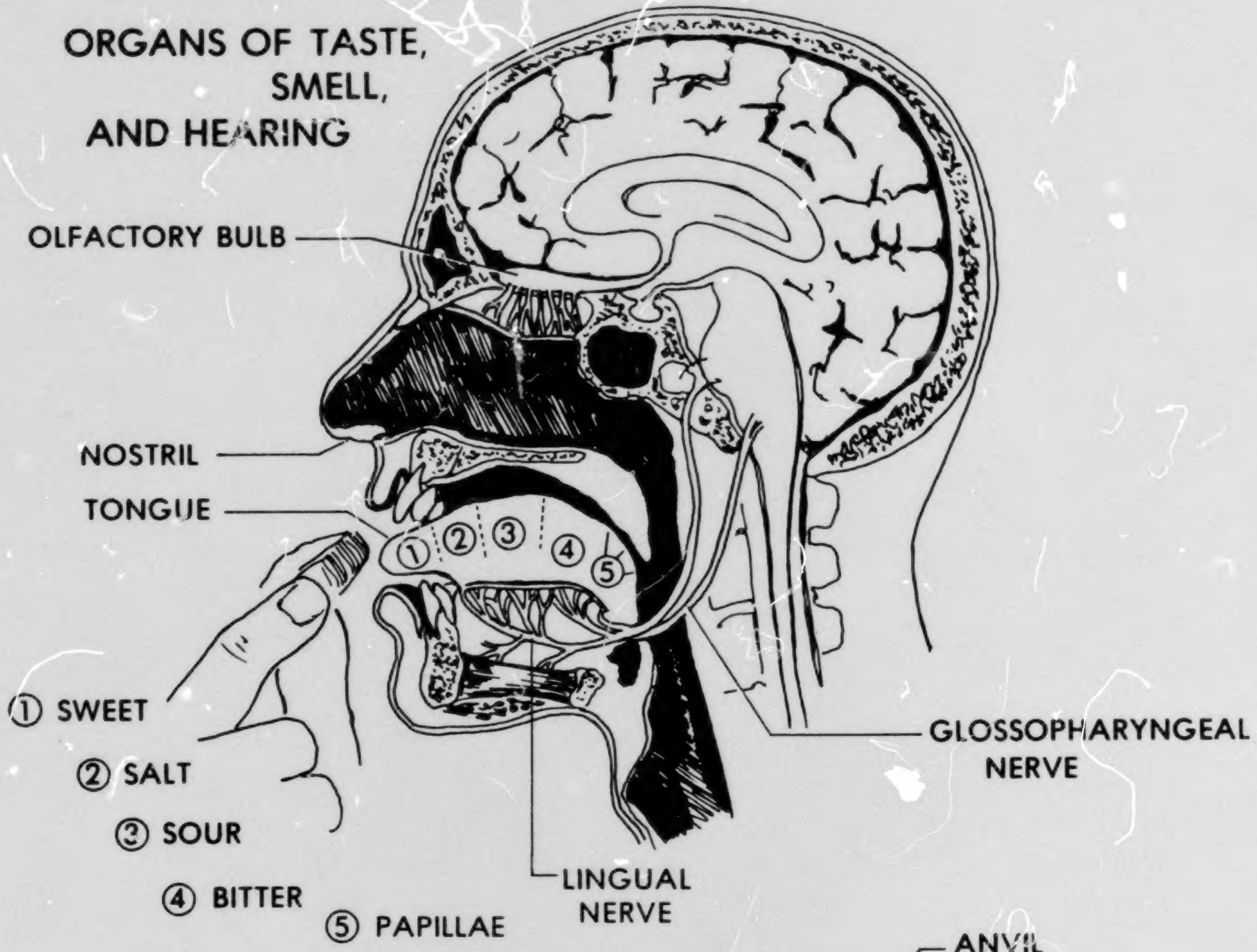
FUNCTION:

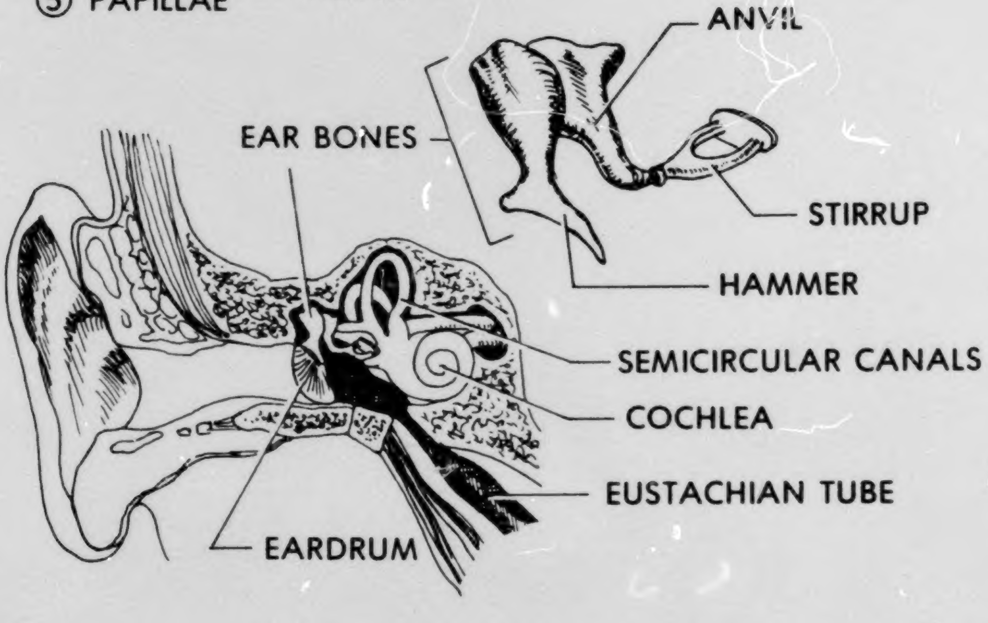
1. CONTROLS BODY ACTIVITIES
2. COORDINATES BODY ACTIVITIES


BRAIN STEM AND SPINAL CORD
FOREBRAIN
MIDBRAIN
PONS
CEREBELLUM
MEDULLA
SYMPATHETIC TRUNK
NERVES AND GANGLIA
ORGANS
EYE
LACRIMAL GLAND
PAROTID GLAND
SALIVARY GLAND
LARYNX
LUNGS
HEART
STOMACH
LIVER
PANCREAS
ADRENAL GLAND
KIDNEY
INTESTINE
COLON
BLADDER
REPRODUCTIVE ORGA
CORD
① oculomotor nerve
② glossopharyngeal nerve
③ facial nerve
④ vagus nerve
⑤ celiac ganglion and plexus
⑥ superior mesenteric ganglion
⑦ inferior mesenteric ganglion and plexus
⑧ pelvic nerve
①
②
③
④
⑤
⑥
⑦
⑧

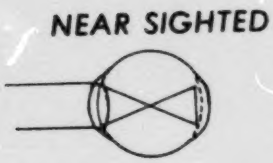
The Sensory System

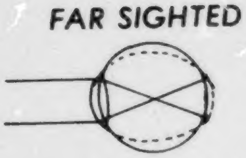
ORGANS OF TASTE, SMELL, AND HEARING

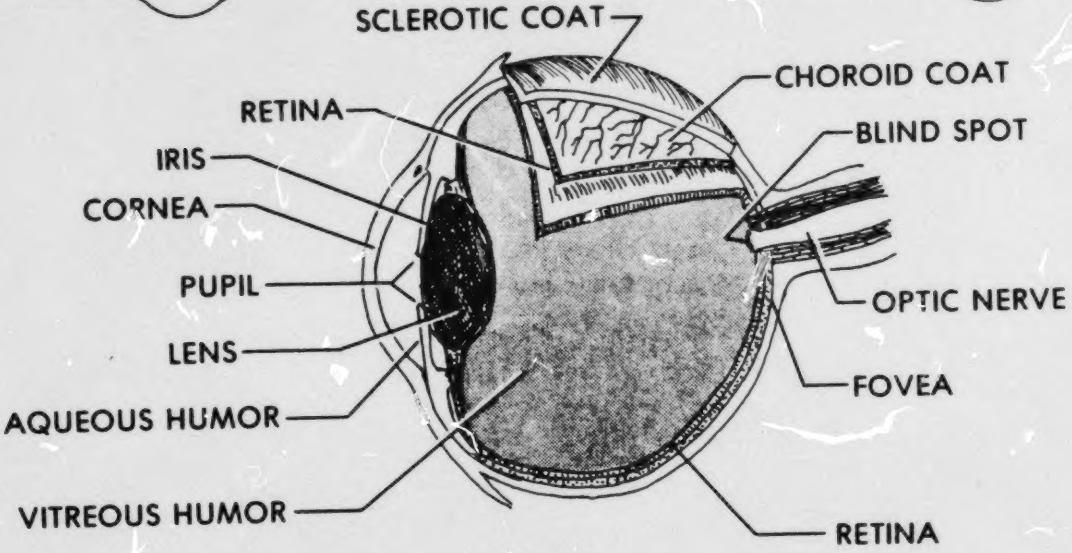

OLFACTORY BULB
NOSTRIL
TONGUE
① ② ③ ④ ⑤
① SWEET
② SALT
③ SOUR
④ BITTER
⑤ PAPILLAE
GLOSSOPHARYNGEAL NERVE
LINGUAL NERVE


ANVIL
EAR BONES
STIRRUP
HAMMER
SEMICIRCULAR CANALS
COCHLEA
EUSTACHIAN TUBE
EARDRUM

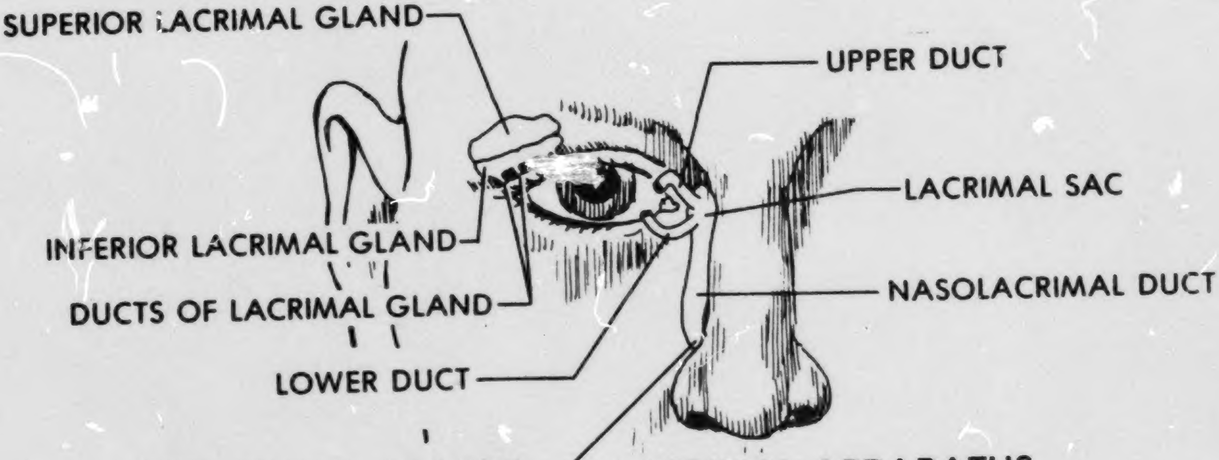
The Sensory System


NEAR SIGHTED


FAR SIGHTED


SCLEROTIC COAT
CHOROID COAT
RETINA
BLIND SPOT
IRIS
CORNEA
PUPIL
OPTIC NERVE
LENS
FOVEA
AQUEOUS HUMOR
VITREOUS HUMOR
RETINA

EYE STRUCTURE - THE ORGAN OF SIGHT


SUPERIOR LACRIMAL GLAND
UPPER DUCT
LACRIMAL SAC
INFERIOR LACRIMAL GLAND
NASOLACRIMAL DUCT
DUCTS OF LACRIMAL GLAND
LOWER DUCT
MOUTH OF DUCT (IN NOSE)

LACRIMAL APPARATUS

FUNCTIONS OF THE SENSORY SYSTEM:

1. VISION
2. HEARING
3. BALANCE
4. SMELL
5. TASTE
6. TOUCH (See Integumentary System)

MEDICATIONS FOR THE NERVOUS AND SENSORY SYSTEMS

GOAL

The nervous system contains those structures (brain, spinal cord and nerves) that coordinate all body functions, both voluntary and involuntary. The spinal cord and nerves act as "wires" that convey messages back and forth between all body parts and the "control center," the brain. Since we human beings are affected by the environment in which we live, the body has been provided with special areas that receive impulses (sensations) from the outside world. These special areas are called sensory organs and receive impressions of sound, sight, smell, taste and touch.

Injury, disease and the aging process can all make it necessary for people to need medications for the treatment of nervous and/or sensory system problems. Personnel administering medications for nervous and sensory system problems should understand how these structures work; what common medications are ordered for nervous and sensory system structures; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for the nervous and sensory systems.

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR THE NERVOUS AND SENSORY SYSTEMS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Nervous and Sensory System
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATIONS FOR THE NERVOUS AND SENSORY SYSTEMS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 40 minutes, you will:

1. Recall the three major functions of the nervous system and the one major function of the sensory system
2. Recognize five common disorders of the Nervous System and two of the Sensory System
3. Identify the three major classifications of Nervous System medications and two Sensory System medications, with two examples of each
4. Select six medications (one stimulant, one analgesic one sedative or hypnotic, one anesthetic, one anticonvulsant and one miotic) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

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Module #A-9-12

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics for the Nurse you are to read pages 234 - 248; the rest if the chapter will be covered at a later date. You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for the Nervous and Sensory System (try to find medications from the different classifications listed in your text if possible.) From your study try to find out (1) the reason for the medication, (2) how long the patient has been on the medication, (3) the effectiveness of the medication (favorable and unfavorable.) Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Nervous and Sensory System." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

STUDENT ACTIVITIES

INSTRUCTIONS

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTIONS:

From the medications listed in your text select six (one stimulant, one analgesic, one sedative or hypnotic, one anesthetic, one anticonvulsant and one miotic). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the six medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work, who are receiving some type of medication(s) for the nervous and sensory systems (try to find medications from the different classifications listed in your text if possible.) Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

NERVOUS AND SENSORY MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of nervous and sensory medications?
____

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________
____
____
____

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________

____

Why do you think this is so? ______________________________

____

____

4. Were there any particular side-effects that seemed common to a given classification of the nervous and sensory medications? _____ If so, what were they? ______________________________

____

____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Review of Structures and Function of the Nervous System
  1. Structures of Nervous System - 3 major parts
    a. brain
      (1) mass of nervous tissue - 3 sections
      (2) located in skull
      (3) "control center" for body (has areas for reasoning, memory, thought, speech, sensation, movement, coordination, regulation of heartbeat, breathing, coughing, etc.)
      (4) right side of brain controls left side of body and vice versa
      (5) protected by bony skull and fibrous covering called meninges
    b. spinal cord
      (1) connected to lowest end of brain
      (2) passes downward between bones of spine (vertebrae) - approximately as big around as thumb
      (3) around 17" - 18" long in adult
      (4) carries impulses (internal and external) to and from the brain
    c. nerves
      (1) small "cable-like" structures leading off lower portion of brain and spinal cord
      (2) 43 pairs of nerves
        (a) 12 pairs off lower brain
        (b) 31 pairs off spinal cord

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ACTIVITIES

A. 1. c. Cont.

(3) nerves carry impulses to and from all parts of body

(4) impulses from brain coordinate action of all body parts (heart, blood vessels, kidneys, lungs, etc.

(5) some nerves act "automatically" or involuntarily, others voluntary or person directs them

(6) "automatic" nerves - called "Autonomic Nervous System" - can speed up or slow down body parts as needed

2. Functions of Nervous System
   a. carry impulses from the outside world and body parts to the "control center."
   b. coordinate impulses from the outside world and body parts
   c. carry responses (reactions) to body parts to react to impulses
3. Structures of Sensory System
   a. eyes
   b. ears
   c. nose
   d. tongue
   e. skin
4. Function of Sensory System - receives outside sensations and relates from outside the human body to proper nerves (visual images, sound, odors, tastes, temperature, pain, texture)

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ACTIVITIES

B. Major Nervous and Sensory Disorders For Which Medication Is Used In Treatment

- 1. Nervous System Disorders
    - a. Slow or non-functioning nerves or brain cells
        - (1) variety of conditions - nerves or cells need stimulation
        - (2) may be caused by internal or external problems
        - (3) examples - poor respiration, poor heartbeat
    - b. Over-functioning nerves of brain cells
        - (1) tend to cause twitching, irregular movements, sometimes improper thought patterns, convulsions, lack of consciousness, etc.
        - (2) examples - twitching, convulsions, Epilepsy most common - patient may have mild to severe condition. When unconsciousness occurs, may last from 5 seconds to several minutes with severe convulsion
        - (3) causes nearly always internal
        - (4) needs medication that will decrease function
    - c. Interference on nerve pathway
        - (1) different types of disorders - may result in loss of motion, uncontrolled body parts, inability of one or more parts to function, cause(s) unknown
        - (2) disorders may be temporary or permanent - may mean person will be bed-fast; have shortened life, etc. outcomes variable
        - (3) medications may help for period of time - but not a cure

ACTIVITIES

B. 1. c. Cont.
- (4) examples of disorders - Huntington's Disease, Myasthenia Gravis - most common is Parkinson's

d. Inflamed nerves or brain cells
- (1) may be due to internal or external causes
- (2) nerves or brain cells irritated and swollen - may be constant condition - may come and go
- (3) almost always accompanied by pain - mild to severe - may or may not lose ability to control body part
- (4) medication given usually for relief of pain, to reduce swelling or both
- (5) examples of disorders - neuritis, neuralgia, Tic Douloureux (nerve of face - excruciating pain), sciatica

e. Infections of nerves or brain cells
- (1) may be due to infections from other parts of body or germs that attack nerve cells
- (2) person usually seriously ill, has symptoms of infection plus interference with nervous system structures
- (3) medication given usually for fighting infection plus slowing down or speeding up nerves and/or brain
- (4) examples of disorders - Meningitis, Encephalitis, Poliomyelitis (medications will be covered in A - 9 - 19)

ACTIVITIES

B. Cont.

2. Sensory System Disorders
    a. Eye - disorders vary
        (1) Conjunctivitis - inflammation of lining of eyelids - may be caused by many things, irritation, allergies, germs - medication depends on cause
        (2) Glaucoma - increased pressure on fluid portion of eyeball - impairs vision - can lead to blindness - fairly common to the Diabetic - medication may be extremely helpful
        (3) Disorders requiring dilatation (enlarging) of pupil - may be for eye examination - may be something like ulcer on cornea (clear window of eye)
    b. Ear - disorders vary
        (1) Impacted Ear - can occur anytime in life - most common in children and elderly - medication may be helpful in softening ear wax that needs to be removed
        (2) Ear infections - may be in any portion of the ear - middle ear infection frequently comes from nose or throat infection - medications for infection may be helpful
        (3) Meniere's Disease (Syndrome) - disturbance of inner ear - not curable - patient may be dizzy, may have nausea, vomiting, ringing in ears - could lose hearing if untreated - medications may be given to relieve uncomfortable symptoms

LECTURE OUTLINE

ACTIVITIES

B. 2. Cont.
c. Nose Disorders - discussed in module 13
d. Tongue and Mouth Disorders - discussed in module 15
e. Skin Disorders - discussed in module 18

C. Classification of Medications Used for Nervous and Sensory System Disorders.
1. Stimulants
2. Depressants
3. Autonomic System Medications
4. Eye Medications
Miotics
Mydriatics

D. Selected Drugs by Classification
1. Stimulants - increase mental and physical alertness and activity including heart rate, respiratory rate, blood pressure, etc.
a. Caffeine - oldest stimulant medication
(1) given orally or parenterally
(2) contained in A. P. C.'s, Aspirin Compound
b. Amphetamines
(1) Synthetic, habit-forming
(2) may be given for weight reduction
(3) side effects - insomnia, dry mouth, loss of appetite
(4) DO NOT GIVE WITHIN 6 HOURS OF SLEEPING
(5) examples:
Benzedrine - supplied in tablets, spansules, I. M. or I.V.
Dexedrine - supplied in tablets, spansules, elixir
Ritalin - amphetamine-like stimulant - oral controlled substance
2. Depressants - decrease mental and physical activity, may make patient relaxed, sleepy
a. Analgesics - relieve pain
(1) Narcotics
a. morphine sulfate - oral, but usually parenteral given q 3-4 h p.r.n. for severe pain
b. codeine - oral, parenteral
1. given q 3-4 h p.r.n. for moderate pain
2. also supresses cough
3. may cause nausea and vomiting
c. meperidine (Demerol) - oral, parenteral given q 3-4 h p.r.n. for pain
d. all may produce addiction
e. all may cause constipation

LECTURE OUTLINE

ACTIVITIES

D. 2. a. Cont.
  - (2) Non-narcotic Analgesics
    - a. propoxyphene (Darvon) - oral given q 3-4 h p.r.n. for pain, few side effects except may be addictive
  - (3) Analgesic-antipyretics - relieve pain and normalize body temperature
    - a. aspirin - oral, rectal given q 3-4 h p.r.n. for pain
    - b. acetaminophen (Tylenol) given q 3-4 h p.r.n. for pain
    - c. sometimes combined with: narcotics - A. P. C. with Codeine
    - d. side effects - bleeding, stomach distress, dizziness, ringing in the ears

b. Sedatives - reduce physical and mental activity
  - (1) phenobarbital (Luminal) oral, parenteral a barbiturate; most commonly used sedative
  - (2) Amytal (amobarbital) oral, parenteral
  - (3) side effects - rash, nausea, dependence
  - (4) may be used to control convulsions

c. Hypnotics - produce sleep
  - (1) chloral hydrate (Noctec) oral, rectal
  - (2) ethchlorvynol (Placidyl) oral
  - (3) flurazepam (Dalmane) oral
  - (4) side effects morning-after drowsiness, stomach upset, dependence

d. Anesthetics - cause loss of sensation
  - (1) local
    - a. Nupercaine - topical, parenteral contained in medications for burns, hemorrhoids
    - b. Xylocaine - topical, parenteral
    - c. side effects - drowsiness, palpitations
  - (2) general
    - a. various medications administered by inhalation or I. V.
    - b. administered by an anesthesiologist or anesthetist with specialized training

LECTURE OUTLINE

ACTIVITIES

D. 2. Cont.
- e. Anticonvulsants - stop or prevent convulsions or seizures
  - (1) phenytoin sodium (Dilantin) oral, parenteral
    - a. given 2-3 times daily to control seizures
    - b. may cause swelling and redness of gums
  - (2) primidone (Mysoline, Sertan) oral
    - a. given 2-3 times daily
    - b. may cause drowsiness, dizziness, double vision
  - (3) diazepam (Valium) oral, parenteral
    - a. given 2-3 times daily routinely
    - b. given parenterally during seizure
    - c. may cause drowsiness, tremors, confusion

3. Autonomic Medications
- a. Sympathomimetic agents
  - (1) epinephrine (Bronkaid Mist, Primatene Mist) inhalants
    - a. dilates respiratory passages, elevates heart rate and blood pressure
    - b. side effects - headache, palpitations
  - (2) epinephrine hydrochloride (Adrenalin) topical, inhalant, I. V.
    - a. dilates respiratory passages, elevates heart rate and blood pressure
    - b. side effects - headache, palpitations
- b. Sympatholytic agents - dilate blood vessels, reduce heart rate and blood pressure
  - (1) Raudixin - oral
    given 1-2 times daily for high blood pressure (hypertension)
  - (2) Aldomet - oral
    given 2-3 times daily for hypertension
  - (3) side effects - dizziness, headache, diarrhea

4. Eye Medications
- a. Miotics - constrict pupil, lower pressure in the eyeball
  - (1) pilocarpine (Pilocar) eye drops
    given 2-4 times a day for glaucoma
  - (2) side effects - headache, perspiration, salivation
- b. Mydriatics - dilate pupil
  - (1) atropine sulfate eye drops
    - a. Used to dilate pupil before eye examination
    - b. causes temporary blurred vision
  - (2) side effects - dry mouth, blurred vision

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

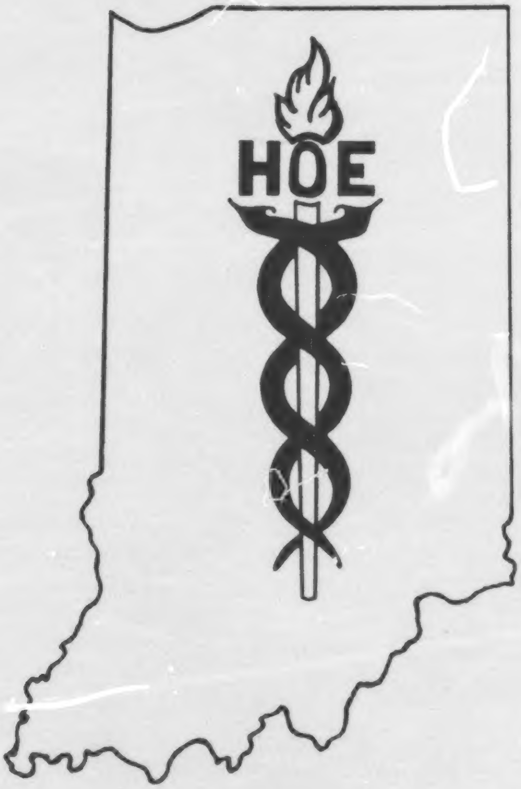
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 13

MEDICATIONS FOR THE RESPIRATORY SYSTEM

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: NANCY WALTS, R.N., M.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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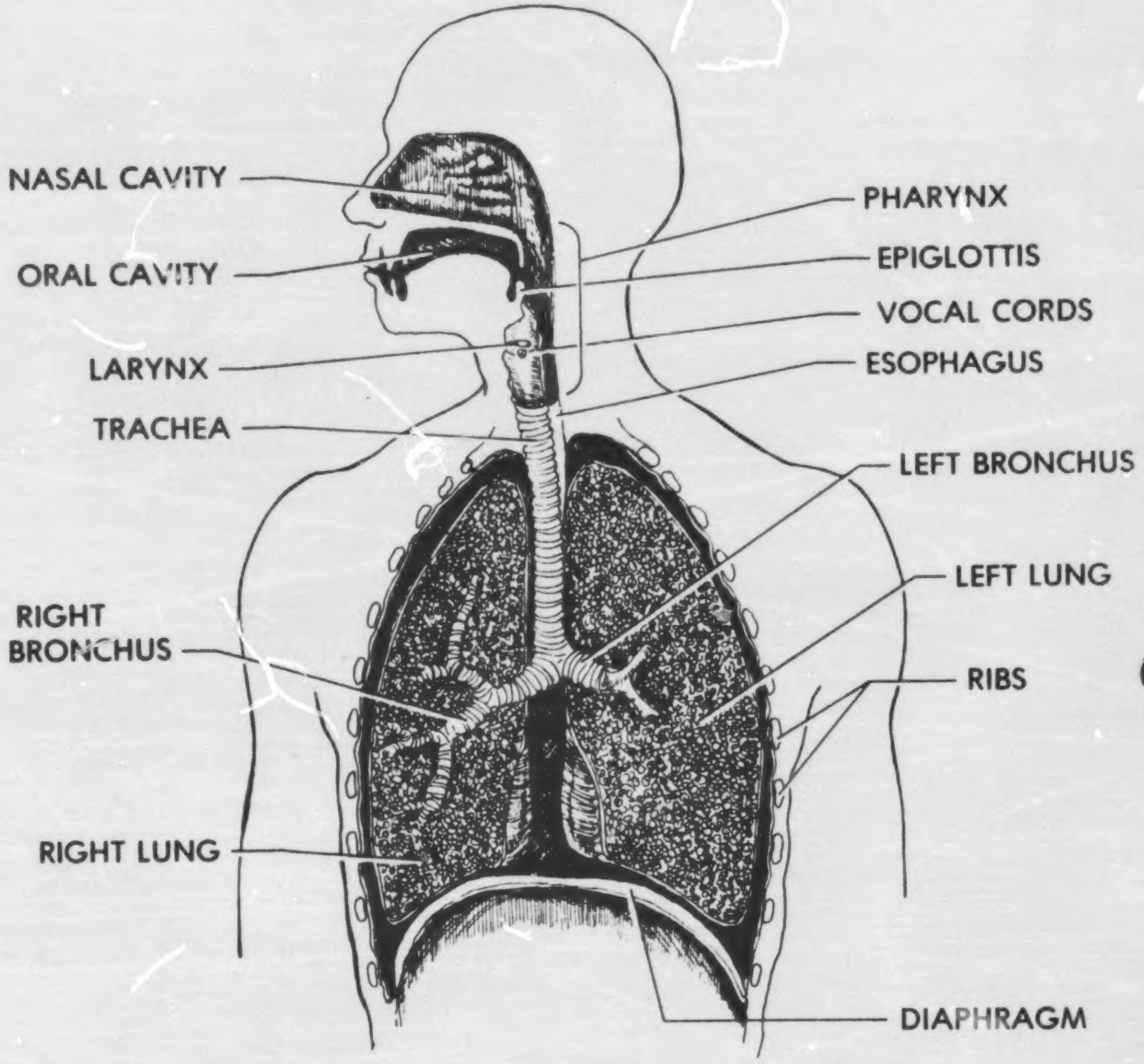
RESPIRATORY SYSTEM


NASAL CAVITY
PHARYNX
EPIGLOTTIS
ORAL CAVITY
VOCAL CORDS
LARYNX
ESOPHAGUS
TRACHEA
LEFT BRONCHUS
LEFT LUNG
RIGHT BRONCHUS
RIBS
RIGHT LUNG
DIAPHRAGM

FUNCTION:

PROVIDES OXYGEN TO CELLS

REMOVES WASTES IN THE FORM OF CO_2

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MEDICATIONS FOR THE RESPIRATORY SYSTEM

GOAL

The structures of the respiratory system (nose, throat, larynx, trachea, bronchi and lungs) are the means by which we are able to breath. Breathing brings oxygen into the body so that all body parts may live. Breathing also removes certain waste products that would be harmful if not eliminated. If problems exist in a person's ability to breath, medications are frequently given to help correct the problem. Chronic diseases of the respiratory tract are an increasingly common cause of disability.

Personnel administering medications for the structures of breathing should understand how these structures work; what common medications are ordered; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for the respiratory system.

TURN TO NEXT PAGE

MEDICATIONS FOR THE RESPIRATORY SYSTEM

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR THE RESPIRATORY SYSTEM

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Structure and Function of the Respiratory System
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATIONS FOR THE RESPIRATORY SYSTEM

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recall the two major functions of the respiratory system

2. Recognize five common diseases/disorders of the respiratory system in which medications are helpful

3. Identify the four major classifications of the respiratory system medications and how administered with one example of each

4. Select five medications (at least one from each classification) and list their:
   a. classification
   b. trade name
   c. chief action
   d. method(s) of administration
   e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics for the Nurse you are to read page 191 - 194, stopping at "Suggested Activities" on page 194 . You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for the respiratory system (try to find medications from the different classifications listed in your text if possible.) From your study try to find out (1) the reason for the medication, (2) the effectiveness of the medication (favorable and unfavorable.) Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Respiratory System." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text select five (at least one from each classification). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the five medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work, who are receiving some type of medication(s) for the respiratory system (try to find medications from the different classifications listed in your text if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

RESPIRATORY MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of respiratory medications? ______

____

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________

____

____

____

CHART STUDY

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________

   ____

   Why do you think this is so? ______________________________

   ____

   ____

4. Were there any particular side-effects that seemed common to a given classification of the respiratory medications? _____ If so, what were they? ______________________________

   ____

   ____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Review of Structure and Function of the Respiratory System

1. Structure of the Respiratory System
    a. consists of air passageway
        (1) nose - 2 sides or nares

        (2) throat - called pharynx - has three parts
            (a) nasal - where joins with nose
            (b) oral - where joins with mouth
            (c) laryngeal - where joins passage to lungs

        (3) larynx - is cartilaginous and muscular. It forms upper part of trachea and contains the vocal cords.

        (4) trachea - (windpipe) in adults is approx. 5 inches long and 1 inch wide

        (5) bronchi - two passageways off trachea that go to each lung.

        (6) lungs - two - right and left, one on either side of chest. Each lung has thousands of little air sacs called alveoli, through which oxygen is absorbed and carbon dioxide is given off. The lungs are covered and chest cavity lined with protective covering called pleura.

    b. accessory structures to Respiratory System
        (1) diaphragm - dome-like muscle below lungs which acts like bellows to draw fresh air in and push wastes out.

        (2) muscles between ribs - allow chest to expand and return to normal position when breathing.

2. Functions of the Respiratory System
    a. bring oxygen into the body to be distributed to every cell by the blood.
        (1) Most oxygen is carried to the body cells in combination with hemoglobin contained in red blood cells.

        (2) Normal range of hemoglobin in adult is 12-15 Gm. per 100 ml. of blood.

    b. take carbon dioxide and other wastes out of the body.

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LECTURE OUTLINE

ACTIVITIES

A. 2. Cont.

- c. rate and depth of breathing depends upon "respiratory center" located in the brain - can be triggered by activity, illness, medications, etc.
    - (1) average respiratory rate for adult is 12-16 respirations per minute.
    - (2) average respiratory rate for newborn is 30-50 respiraions per minute.

B. Disorders of Respiratory System for Which Medication is Given

1. Abnormal Respirations or Respiratory Arrest
    - a. can happen for many reasons - obstruction, decrease in area of respiratory surface available for gas exchange, infections
    - b. individual can only live a few minutes without oxygen
    - c. breathing needs to be stimulated if possible.

2. Asthma - (sometimes called Bronchial Asthma)
    - a. condition in which the smaller bronchioles become congested and there is spasm of the bronchi, mucus is secreted into the bronchioles. The obstructed airway causes shortness of breath, dyspnea, wheezing and cough.
    - b. if the attack is severe and/or prolonged, the effort required to maintain breathing is extremely tiring, placing considerable strain on heart.
    - c. can be caused by allergies, infections or emotional tension - combination of all.
    - d. breathing problems - must be relieved as soon as possible - bronchi dilated.

3. Bronchitis
    - a. inflamation or swelling of the lining of bronchi
    - b. usually caused by germs, irritation like dust or smoke, or cold weather
    - c. usually have dry cough followed by thick mucous - may have fever. In young children this condition may cause serious airway obstruction.
    - d. need something to sooth lining, promote healing - sometimes need something to dilate bronchi.

LECTURE OUTLINE

ACTIVITIES

B. 4. Pulmonary Emphysema

- a. condition of lungs in which air flow through the end of bronchioles is obstructed and lung tissue is destroyed.
- b. usually associated with smoking, inhalation of dust and/or chronic lung infections.
- c. the bronchioles and alveoli become greatly dilated, elastic tissue is lost, the alveoli collapse and air cannot get out.
- d. lungs become distended, the chest wall becomes fixed - barrel chest. There is shortness of breath and dyspnea.
- e. condition gradually gets worse, but usually treated at home unless serious - medications plus breathing treatments most helpful.

5. COLD (chronic obstructive lung disease) or COPD (chronic obstructive pulmonary disease)

- a. term used to describe a chronic condition of poor air flow in the lungs.
- b. usually results from asthma or chronic bronchitis caused by air pollution or smoking.
- c. symptoms are chronic cough, dyspnea, weakness and fatigue.
- d. condition is not curable but may be improved by breathing exercises, bronchodilators, and expectorants.

6. Rhinitis

- a. inflammation and swelling of lining of nose, causes sneezing, runny nose, congestion, etc.
- b. caused by allergies, irritants, germs, etc. If caused by pollen, called "Hay Fever".
- c. can occur with colds, may necessitate mouth-breathing.

7. Infectious Conditions of Respiratory System

- a. common cold is a communicable viral disease which may affect any part of the respiratory tract. Medications do not cure, only relieve symptoms.
- b. pneumonia is a bacteria or virus-caused condition in which the alveoli become filled with secretions that become solid.
  - (1) An entire lung may be involved, or the inflammation may be scattered through lung tissue.
  - (2) bacterial type very dangerous, treated with antibiotics.

ACTIVITIES

B. 7. Cont.

c. tuberculosis is caused by a specific bacteria, Myobacterium tuberculosis.
  (1) It is a communicable disease which used to kill thousands of people yearly. Currently the death rate is greatly reduced due to preventive measures and anti-tuberculin medications.
  (2) The invasion of lung tissue by the bacteria results in formation of "tubercules" which may become hardened, reducing the ability of the lung to use oxygen.

C. Classification of Respiratory Medications With Modes of Administration

1. Four main classifications of respiratory medications-

a. Respiratory stimulants - those medications which increase the rate and depth of respiration (breathing)
  (1) may reach respiratory center by blood stream
  (2) may reach respiratory center along nerve pathway from organ of sensation (nose, skin, etc.)

b. Cough mixtures - medications given to treat cough; two types
  (1) Antitussives - can be divided into narcotic and non-narcotic products. Antitussives depress cough by depressing the activity of the cough center in the brain or by local action.
  (2) Expectorants - help to liquefy mucous and make it easier for the patient to clear the respiratory tract by coughing more productively.

c. Bronchodilators - medications which relax bronchial muscle spasms and open the breathing passages.

d. Nasal decongestants - shrink mucous membranes and relieve nasal swelling.

2. Medications that help relieve allergic reactions in the respiratory system will be discussed in Module #A-9-21.

3. Medications that help relieve infections of the respiratory system will be discussed in Module #A-9-19.

4. Modes of administering respiratory medications

a. orally - by mouth, most commonly used method

C. Cont.

b. inhalation - by breathing in
c. parenterally - by injection
d. rectally - by suppository
e. sublingually - under tongue
f. nebulization - mist to lining of nose and/or throat

D. Action, Dosage and Side-effects of Selected Medications

1. Respiratory Stimulants
a. Spirits of Ammonia (smelling salts)

(1) irritates lining of nose
(2) inhalation of drug triggers respiratory center.

b. Coramine

(1) parenteral; 1.5 ml of 25% solution
(2) for extreme emergency in respiratory arrest

c. many of these medications for emergencies only

d. majority of them given by injection or inhalation

e. many side-effects such as rise in blood pressure, stomach irritaion, restlessness, insomnia, etc.

2. Cough Medications

a. Antitussives

(1) codeine - controlled substance - Schedule II
(a) orally, 15-30 mg. every 3 or 4 hours
(b) used to depress cough reflex, may be in combination with other drugs.
(c) may produce drowsiness, nasal congestion
(2) Tessalon - non-narcotic, 100mg. 3 times a day
(3) Romilar - non-narcotic, 15-30 mg. 3 times a day
(4) after taking cough syrup, no fluids for 15 minutes

b. Expectorants
(1) ammonium chloride
orally; 0.3 Gm q.i.d. with full glass water

ACTIVITIES

D. 2. b. Cont.

(2) Nectadon - orally; 15-30 mg. tab t.i.d. or syrup, 2 mg. per ml., t.i.d.
(3) potassium iodide - 300 mg. orally q.i.d. with full glass of water (Pima, SSKI)
(4) terpin hydrate - orally; 4 ml. prn q 3-4 hours; few side effects, very safe
(5) Robitussin - orally; 100-200 mg. q 2-4 hours; few side effects
(6) many expectorants produce gastric irritation, nausea and vomiting.
(7) the simplest way to prevent respiratory tract obstruction with sticky mucus is to give the patients lots of fluids.

3. Bronchodilators (sometimes called antispasmodics)

a. aminophyllin - most commonly used one in acute and chronic asthmatic conditions.

(1) given orally, parenterally or rectally
(2) 100-200 mg. orally; 100-500 mg. rectally
(3) causes fall in blood pressure, headache, dizziness, and stomach upset.

b. Adrenalin - may be given for severe spasms or tightness of bronchi. Best for treating acute asthmatic attacks.

(1) given in very small doses 1:1000 sol. - 0.2-1 mg.
(2) given by inhalation or injection
(3) produces rise in blood pressure, rapid pulse, anxiety, and headache.

c. Isuprel - given for mild to moderately severe asthmatic attacks.

(1) sublingual tablets may be helpful 10-15 mg. as needed
(2) also given by inhalation
(3) may cause increased rate - used cautiously with heart patients.

ACTIVITIES

D. 3. Cont.
   d. Amesec - 1 enseal 1 to 3 times a day. Adverse reactions include nervousness, tachycardia.

   e. Tedral - 1-2 tablets q 4 hours. Adverse reactions include insomnia, nervousness.

4. Nasal Decongestants - shrink mucous membranes

   a. Privine - 2 gtts of 0.05% sol. no more than every 3 hours as nasal spray

   b. Afrin - 2-4 gtts b.i.d. in each nostril as nasal spray

   c. Neosynephrine Hydrochloride - several gtts in each nostril as needed

   d. Actifed - oral - 1 tablet 1-3 times a day - also contains antihistamine

   e. Sinutab - oral - 1 tablet q 4 hours as needed

5. For other Respiratory stimulants, cough mixtures and bronchodilators, see the PDR

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CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

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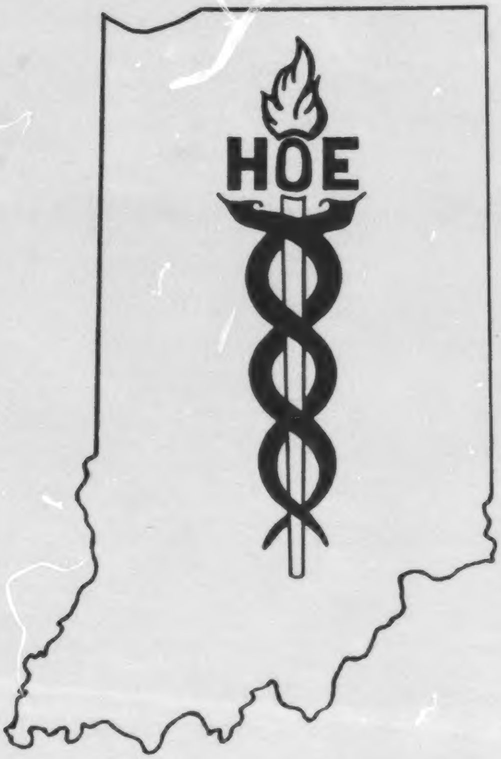

MODULE

A - 9 - 14

MEDICATION FOR THE CIRCULATORY SYSTEM

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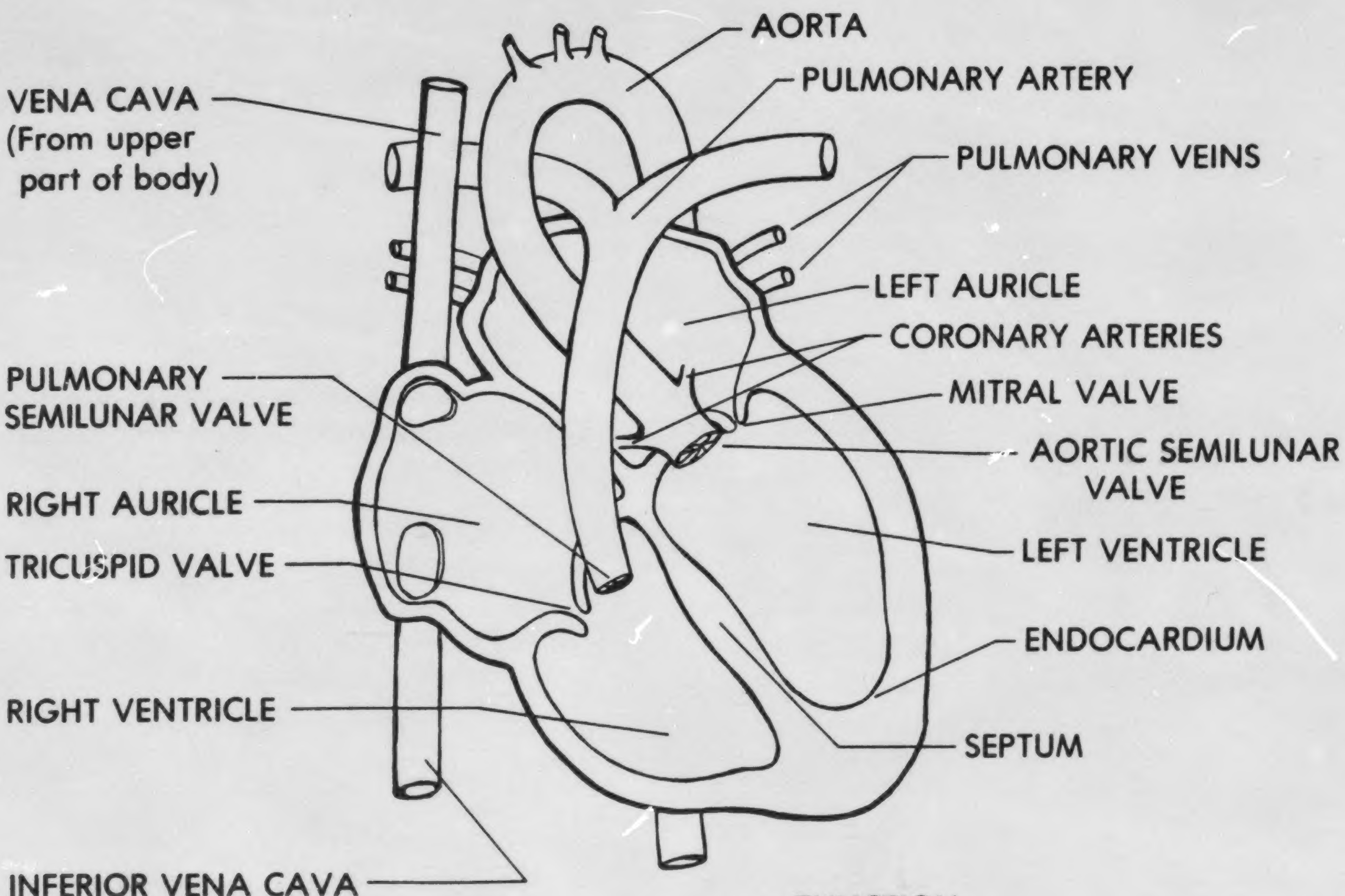
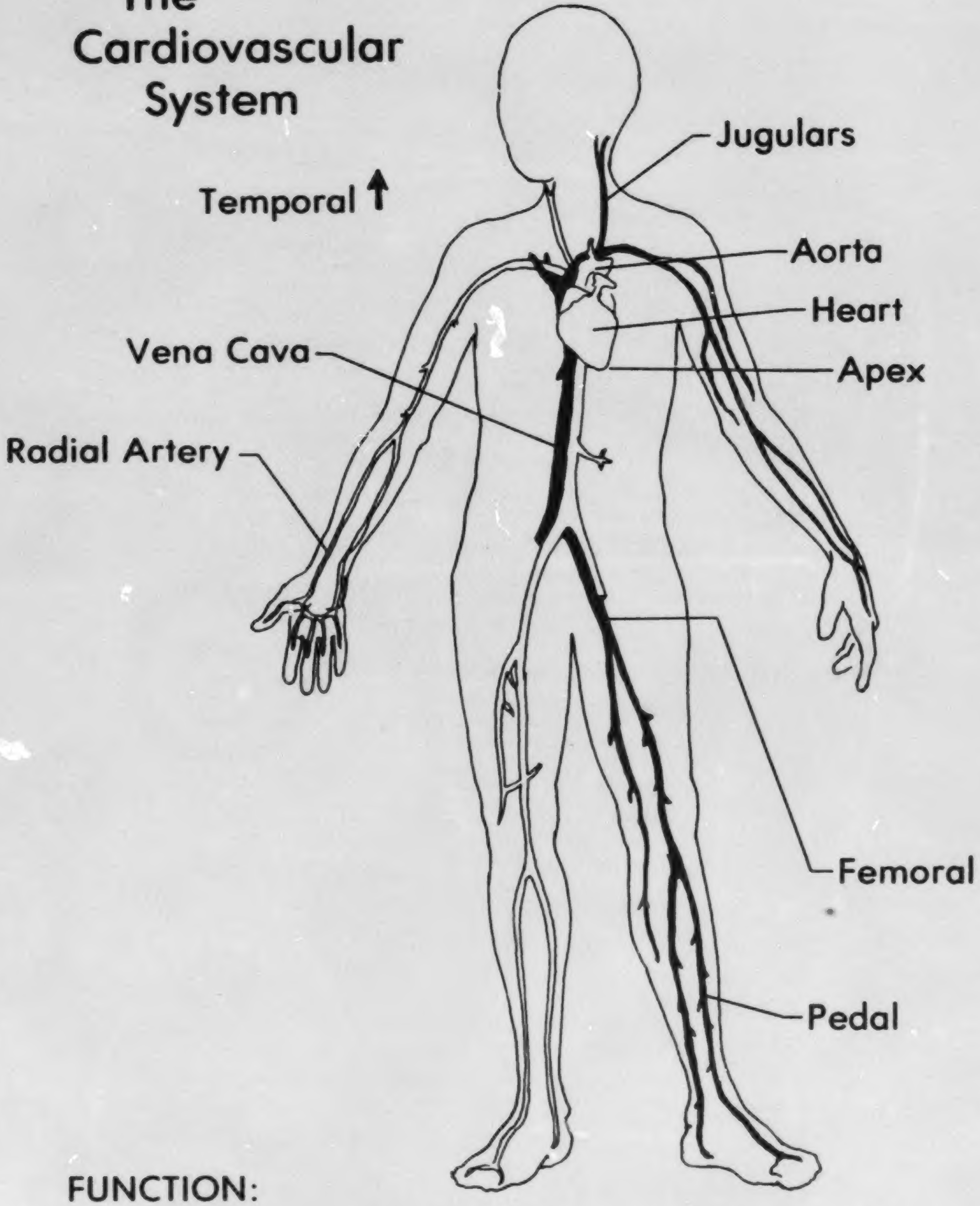
THE HEART

Module #A-9-14


AORTA
PULMONARY ARTERY
VENA CAVA (From upper part of body)
PULMONARY VEINS
LEFT AURICLE
CORONARY ARTERIES
MITRAL VALVE
PULMONARY SEMILUNAR VALVE
AORTIC SEMILUNAR VALVE
RIGHT AURICLE
LEFT VENTRICLE
TRICUSPID VALVE
ENDOCARDIUM
RIGHT VENTRICLE
SEPTUM
INFERIOR VENA CAVA (From lower part of body)

FUNCTION:
PUMPS BLOOD THROUGH THE BLOOD VESSELS

The Cardiovascular System


Jugulars
Temporal ↑
Aorta
Heart
Vena Cava
Apex
Radial Artery
Femoral
Pedal

FUNCTION:

1. CARRIES NUTRIENTS AND OXYGEN TO CELLS BY WAY OF BLOOD VESSELS
2. REMOVES WASTE FROM CELLS

MEDICATION FOR THE CIRCULATORY SYSTEM

GOAL

The circulatory system contains those structures (heart, vessels and blood) that supply the body with all vital substances needed for life and are the system by which waste products are removed from all cells. Without the work of these structures, body parts cannot go on living. Due to disease, injury and the aging process, there are times when the structures of the circulatory system cannont function properly. For some of these situations, medications may be helpful in restoring partial or complete functioning.

Personnel administering medications for heart, blood vessels and blood should understand how these structures work; what common medications are ordered for heart, blood vessels and blood; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for the circulatory system.

TURN TO NEXT PAGE

MEDICATIONS FOR THE CIRCULATORY SYSTEM

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR THE CIRCULATORY SYSTEM

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Structure and Function of the Circulatory System
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATION FOR THE CIRCULATORY SYSTEM

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 40 minutes, you will:

1. Recall the four major functions of the circulatory system
2. Recognize eight common disorders of the circulatory system with one medication for each disorder
3. Identify the six classifications of the circulatory system medications
4. Select six medications (one from each classification) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics for the Nurse you are to read page 181 - 189, stopping at "Suggested Activities" on page 189. You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least five different patients, in the area where you work, who are receiving some type of medications for the circulatory system (try to find medications from the different classifications listed in your text, if possible.) From your study try to find out (1) the reason for the medication, (2) how long the patient has been on the medication, (3) the effectiveness of the medication (favorable and unfavorable.) Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Circulatory System." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text select eight (one for each classification). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the eight medications.

CHECK LIST:

Complete the check list.

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CHART STUDY

ACTIVITIES

Study the charts of at least five different patients in the area where you work, who are receiving some type of medication(s) for the circulatory system (try to find medications from the different classifications listed in your text, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

CIRCULATORY MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
4.				
5.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of circulatory medications? ________
____

2. Were any classifications more common than others? ____ If so, why do you think this was the case? ______________________________
____
____
____

Module #A-9-14

CHART STUDY

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________

   ____

   Why do you think this is so? ______________________________

   ____

   ____

4. Were there any particular side-effects that seemed common to a given classification of the circulatory medications? _____ If so, what were they? ______________________________

   ____

   ____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Review of Structure and Function of the Circulatory System
  1. Structure of Circulatory System - heart, blood vessels and blood
    a. heart
      (1) about size of doubled-up fist
      (2) lies in center of chest - slightly to left
      (3) hollow inside - divided into 4 chambers or compartments - 2 upper - atria; 2 lower - ventricles
      (4) made of muscle that contracts - works like pump
      (5) right side pumps blood to lungs - left side pumps blood to rest of body
      (6) works continously - rests between beats - rate of beat regulated by impulse center called S-A Node
    b. blood vessels - carry blood to all cells
      (1) three types
        (a) arteries - carry blood away from heart
        (b) veins - carry blood to heart
        (c) capillaries - "in-between" vessels or tubes - carry supplies to cells - pick up wastes from cells
      (2) rate of heartbeat - can be felt in arteries - called pulse
      (3) force of heartbeat - pushing against wall of arteries - called "blood pressure"

LECTURE OUTLINE

ACTIVITIES

A. 1. Cont.
   - c. blood - essential liquid for life
     - (1) pumped by heart
     - (2) moved or circulated through blood vessels
     - (3) approximately 4-6 quarts in average adult
     - (4) composed of many things
       - (a) plasma - liquid portion
         - 1 90% water
         - 2 minerals, especially salts
         - 3 food elements, including vitamins
         - 4 gases
         - 5 hormones, medications, etc.
         - 6 waste products
       - (b) cells that float in plasma
         - 1 red blood cells - carry iron in form called hemglobin (necessary to pick up oxygen)
         - 2 white blood cells - fight infection - protect cells from germ invasion
         - 3 platelets - hold substance that is essential to clot formation - help prevent hemorrhage

2. Functions of the Circulatory System - four main ones
   - a. pump the blood (heart)
   - b. provide a pathway for the blood (blood vessels)
   - c. carry essentials to all body cells (blood)
   - d. carry wastes away from body cells (blood)

LECTURE OUTLINE

ACTIVITIES

A. Continued

3. Effectiveness of Circulatory System - depends on three things
    - a. rate, rhythm, and force of heart
    - b. give and take of blood vessels
    - c. content of blood

B. Major Circulatory Disorders For Which Medication Is Helpful

1. Myocardial Ischemia
    - a. lack of adequate blood supply to the heart muscle itself due to thickening and narrowing of the artery walls
    - b. causes shortness of breath on exertion
    - c. main cause of death in the elderly is disease of the blood vessels that supply the heart

2. Angina Pectoris
    - a. pain in chest and left arm due to myocardia ischemia
    - b. also causes flushing and perspiration
    - c. aggravated by smoking
    - d. usually relieved by vasodilator drugs

3. Coronary Occlusion - The Most Common Medical Emergency
    - a. blockage of an artery which supplies blood to the heart muscle
    - b. causes death of muscle (myocardial infarction)
    - c. seriousness depends on size and location of heart vessel blocked
    - d. symptoms - crushing chest pain, shortness of breath, anxiety, indigestion, shock and collapse
    - e. requires immediate hospitalization, intensive care

4. Congestive Heart Failure
    - a. heart is unable to circulate the blood around the body adequately
    - b. common condition in the elderly
    - c. caused by heart muscle weakness, hypertension, changes in heart valves due to disease
    - d. symptoms are edema (swelling) in feet and legs, cough and shortness of breath (due to fluid accumulation in the lungs), fatigue
    - e. treated with cardiotonics (heart stimulants) and diuretics

5. Heart Arrhythmias
    - a. irregularity in rate and rhythm of heart
    - b. may be too fast, too slow, irregular, skip beats
    - c. often caused by failure of impulse center in heart
        - sometimes follows coronary occlusion (heart attack)
        - sometimes side effect or toxic effect of drug patient is taking

B. Continued
   6. Shock
      a. collapse of the blood vessels resulting in poor blood supply to entire body
         (1) may be due to dilation of the blood vessels
         (2) may be due to blood loss (hemorrhage)
      b. symptoms - rapid heart beat, pallor, perspiration, lightheadedness, fainting, low blood pressure
      c. treated with vasoconstrictor drugs which narrow (constrict) the blood vessels
   7. Ateriosclerosis - hardening of blood vessel walls due to calcium deposits
      Artherosclerosis - narrowing of blood vessel walls due to cholesterol plaque formation
      a. both diseases interfere with blood circulation
      b. both diseases put added strain on the heart
      c. symptoms - skin color pale or blue (cyanosis), muscle cramping, pain in hands in feet
      d. sometimes cause ulcers (sores) to develop on legs and feet
   8. Hypertension - high blood pressure
      a. generally, systolic pressure above 140, diastolic pressure above 90 considered high blood pressure
      b. may be caused by kidney disease, adrenal gland tumors, brain disease, heart disease, but usually cause is unknown
      c. symptoms are dizziness, headache, palpitations, fatigue
      d. aggravated by obesity, smoking
      e. treated with antihypertensive drugs (sympathomimetics, diuretics, vasodilators) also helpful in treatment are; exercise, weight control
   9. Cerebral Vascular Accident (stroke)
      a. blood clot or ruptured blood vessel in the brain
      b. symptoms depend on area of the brain affected. May be weakness or paralysis, inability to speak or read, loss of memory, unconsciousness
      c. sometimes related to hypertension
      d. sometimes vasodilator drugs are used in treatment
   10. Hemorrhage - excessive blood loss
      a. may be internal (due to disorders of internal organs, such as bleeding ulcer)
      b. may be external (due to injury)
      c. if blood does not clot properly medication can be given to treat this - coagulants
   11. Blood Clot Formation (Thrombosis)
      a. if clot forms in a vessel it interferes with blood supply to an area
      b. clot may break loose and move to a more vital area (such as lungs)
      c. causes of clot formation can be injury, surgery, inflammation of veins, abnormal blood clotting
      d. might be treated with anticoagulant drugs

LECTURE OUTLINE

ACTIVITIES

B. Continued
12. Anemias
a. lowered number of red blood cells and/or decrease in hemoglobin (iron in blood)
b. causes may be severe blood loss, body failing to produce enough cells, disease which causes cells to be destroyed
c. medications (hematinics) may be helpful
d. symptoms include pale color, fatigue, dizziness, weakness

C. Classifications of Medications used in Cardio-vascular Disease Treatment
1. Cardiotonics (heart stimulants) - slow and strengthen heart action
2. Antiarrhythmics - regulate the heart rhythm
3. Antihypertensives - lower blood pressure
4. Vasodilators - dilate (relax and enlarge) blood vessels
5. Anticoagulants - decrease blood clot formation
6. Hematinics - help to build up red blood cells and hemoglobin in the blood

D. Selected Drugs Listed by Classification
1. Cardiotonics (heart stimulants)
a. slow and strengthen heart action
b. usually given orally, once or twice daily
c. side effects include fatigue and loss of appetite (early symptoms), low pulse rate, yellow-green halos around visual images, irregular heart beat
d. examples
(1) digitoxin (Crystodigin)
(2) digoxin (Lanoxin, SK Digoxin)
(3) lanatoside C (Cedilanid)
2. Antiarrhythmics
a. regulate heart rate and rhythm
b. some are given I.V. in emergencies, routine medications given orally
c. side effects include nausea, vomiting, confusion, low blood pressure (hypotension)
d. examples
(1) propranolol (Inderal)
(2) quinidine (CinQuin, Cardioquin)
(3) procainamide (Pronestyl)
3. Antihypertensives - decrease blood pressure
a. sympathomimetics - decrease blood pressure by effect on the nervous system
(1) methyldopa (Aldomet)
(2) clonidine (Catapres)

LECTURE OUTLINE

ACTIVITIES

D. 3. Cont.
- b. diuretics - decrease blood pressure and increase urinary output
  - (1) spironolactone (Aldactone)
  - (2) chlorothiazide (Diuril)
  - (3) methyclothiazide (Enduron)
  - (4) Aldactazide and Diazide (combinations containg hydrochlorthiazide)
- c. vasodilators - decrease blood pressure by relaxing (dilating) blood vessels
  - (1) prazosin (Minipress)
  - (2) hydralazine (Apresoline)
- d. all drugs previously listed are given orally; others may be I.V. or I.M. for emergencies
- e. side effects include dizziness, weakness, nausea, vomiting low blood pressure

4. Vasodilators - dilate blood vessels
- a. given for angina pectoris and poor circulation to brain and extremities
- b. most given orally, 2-4 times daily
- c. examples
  - (1) nitroglycerin - for Angina Pectoris
    - to improve blood supply to heart muscle
    - given sublingually - often left at patient's bedside
    - also comes in topical form to be rubbed on chest
  - (2) Nitrobid - sustained-release form of nitroglycerin
  - (3) nicotinic acid
  - (4) papaverine (Cerespan, Pavacen)
  - (5) isoxsuprine (Vasodilan)
  - (6) cyclandelate (Cyclospasmol)
  - (7) isosorbide (Isordil, Sorbitrate)
- d. side effects are perspiration, flushed face, low blood pressure, headache

5. Anticoagulants - decrease blood clot formation
- a. sometimes given for thrombophlebitis or other conditions of abnormal clot formation
- b. examples
  - (1) dicumarol (Dufalone) given orally
  - (2) warfarin (Coumadin) given orally
- c. physician must watch patient's blood clotting ability carefully - these drugs may be very dangerous
- d. side effects - hemorrhage - blood in stool or urine, bleeding gums, bruises on arms or legs

6. Hematinics - Iron preparations to counteract anemia
- a. given orally or I.M.
- b. examples
  - (1) ferrous sulfate (Feosol) oral 2-3 times daily
  - (2) iron dextran (Imferon) I.M. usually given 1-2 times a week
  - (3) many vitamin preparations contain iron
- c. side effects include nausea, vomiting, black stools (when given orally)

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

Instructor's Signature ____________________

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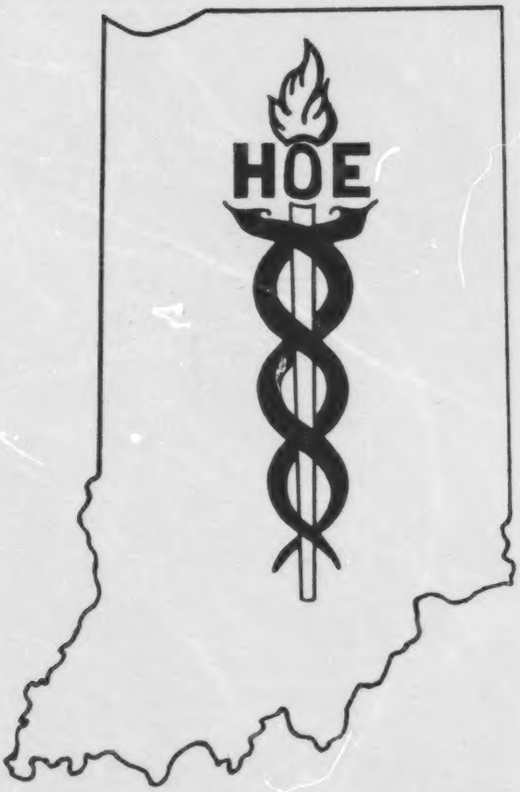
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

A - 9 - 15

MEDICATION FOR THE GASTROINTESTINAL SYSTEM

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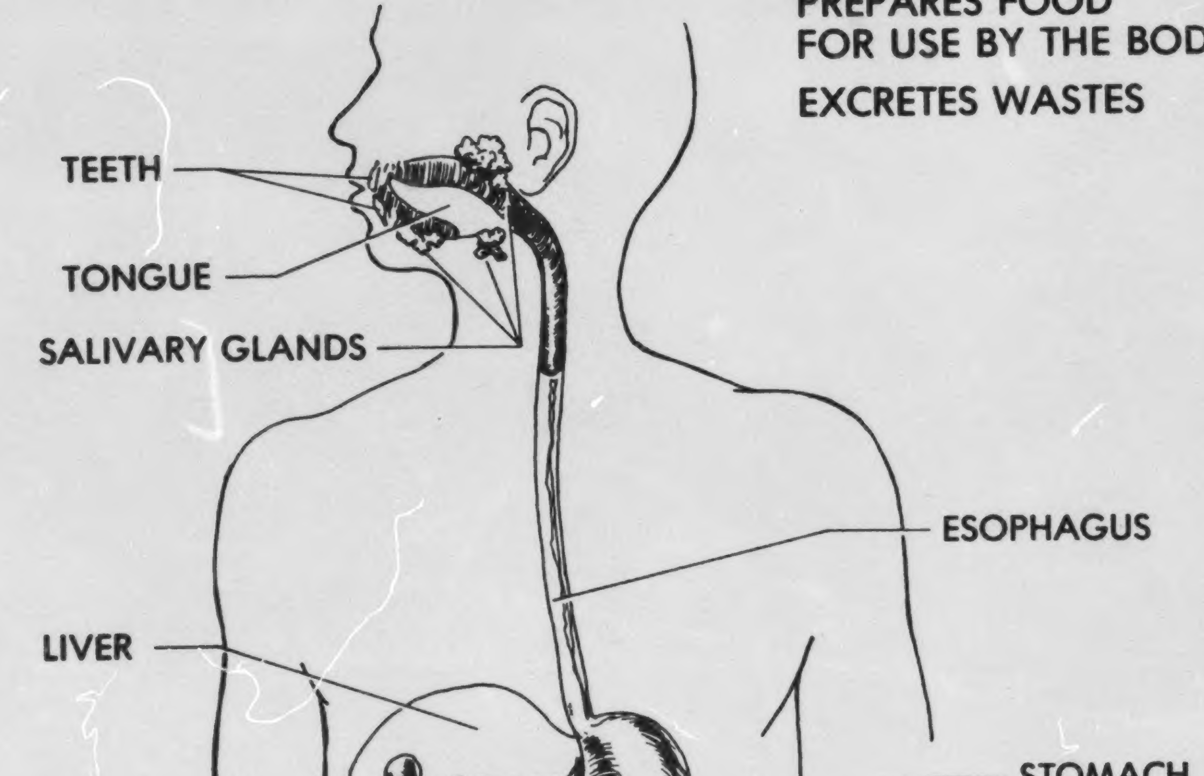
DIGESTIVE SYSTEM

FUNCTION: INGESTS FOOD

PREPARES FOOD FOR USE BY THE BODY

EXCRETES WASTES


TEETH
TONGUE
SALIVARY GLANDS
ESOPHAGUS
LIVER
STOMACH
PANCREAS
GALL BLADDER
LARGE INTESTINE
SMALL INTESTINE
APPENDIX
ANUS

MEDICATIONS FOR THE GASTROINTESTINAL SYSTEM

GOAL

The gastrointestinal system is that group of structures (mouth, teeth, throat, esophagus, stomach, liver, pancreas and intestines) that has the main purposes of digesting the food eaten and removing the waste products from digestion. The digestive process changes food to a liquid state so that it can be absorbed into the blood vessels and carried to every cell. Foods must change in both appearance and chemical composition in order to be used; waste products must be eliminated in order for the body to be healthy.

If either the digestive or elimination process is interfered with through injury, disease or aging, essential foods might not be available for the body cells and wastes might be trapped in the body. In order to help correct problems of the gastrointestnal system, it might be necessary to administer medications. Personnel administering medications for gastrointestinal system problems should understand how these structures work; what common medications are ordered for gastrointestinal system structures; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for the gastrointestinal system.

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR THE GASTROINTESTINAL SYSTEM

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Structure and Function of the Gastrointestinal System
2. Introduction to the Process of Body Nutrition
3. Modules # A-9-1 through # A-9-10
4. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATIONS FOR THE GASTROINTESTINAL SYSTEM

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 40 minutes, you will:

1. Recall the three major functions of the gastrointestinal system
2. Recognize twelve common disorders of the gastrointestinal system and one medication for each
3. Identify the seven classifications of the gastrointestinal system medications
4. Select seven medications (one antacid, one anticholinergic, one digestant, one antiemetic, one bulk laxative, one stimulant laxative, and one antidiarrheal)and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics for the Nurse you are to read page 197 - 208, stopping at "Suggested Activities" on page 208. You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least five different patients, in the area where you work, who are receiving some type of medications for the gastrointestinal system (try to find medications from the different classifications listed in your text if possible.) From your study try to find out (1) the reason for the medication, (2) the effectiveness of the medication (favorable and unfavorable.) Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Gastrointestinal System." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text select seven (one antacid, one anticholingergic, one digestant, one antiemetic, one antidiarrheic, one bulk laxative, one stimulant laxative.) Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the seven medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least five different patients in the area where you work, who are receiving some type of medication(s) for the gastrointestinal system (try to find medications from the different classifications listed in your text, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

GASTROINTESTINAL MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
4.				
5.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of the gastrointestinal medications?
   ____

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________________
   ____
   ____
   ____

CHART STUDY

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________
____

Why do you think this is so? ______________________________
____
____

4. Were there any particular side-effects that seemed common to a given classification of the gastrointestinal medications? _____ If so, what were they? ______________________________
____
____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Review of Structure and Function of the Gastrointestinal System
1. Structure of Gastrointestinal System
a. two divisions
(1) alimentary canal or tract - passageway through which food travels - approximately 30 feet in length
(2) accessory organs - structures in or near the passageway which help digestive process
b. alimentary canal structures
(1) mouth - oral cavity - entrance for food under normal conditions - food first broken up here by chewing
(2) throat - pharynx - joined to esophagus
(3) esophagus - tube that carries food from throat to stomach
(4) stomach - pouch-like structure where food is further broken up
(a) upper left side of abdomen
(b) just below diaphragm
(c) mostly muscle which moves food around in all directions
(d) lined with mucous membrane which secretes "gastric juices" - hydrochloric acid and chemical substances that break up food particles
(e) food held in stomach 3-5 hours (depending upon type and amount)

ACTIVITIES

A. 1. b. Cont.

(5) small intestine

(a) area where digestion is completed and liquid food absorbed into blood stream - if food passes this area it will not be absorbed

(b) about 1½ inches in diameter and 20 feet long

(6) large intestine

(a) area where unabsorbed foods and waste products in passageway are carried to outside

(b) excess water re-absorbed into blood stream here

(c) about 2½ inches in diameter and 5 feet long

(d) ends at anal sphincter - tight muscle that opens and releases wastes to outside

c. accessory organs

(1) teeth - found in mouth - 2 sets

(a) 20 in baby

(b) 32 in adult

(c) break up food - if no teeth or dentures - must have soft or ground foods

(2) tongue - muscular, flexible organ

(a) contains taste buds

(b) moves food around to be chewed

(c) helps swallow and pass food on down throat

(3) liver - serves many functions

(a) located in right upper abdomen - weighs about 3 pounds

LECTURE OUTLINE

ACTIVITIES

A. 1. c. (3) Cont.
(b) makes bile - used to help digest fats
(c) stores nutrients (food essentials in liquid form) not needed - such as, vitamins, minerals, proteins
(d) has other important functions also
(4) pancreas
(a) fish-shaped structure - behind the stomach
(b) has several types of cells
1) some cells make chemical substances needed to digest foods
2) other cells make Insulin - necessary to metabolize (use) sugars
2. Three Main Function of Gastrointestinal System
a. digest or change food into a form body cells can use
b. provide a place for nutrients (food essentials in liquid form) to be absorbed
c. eliminate waste products of the digestive process

B. Disorders of the Mouth
a. dental caries - tooth decay
(1) caused by poor oral hygiene
(2) often causes loss of appetite
b. Pyorrhea - infection of the gums
(1) often due to poor oral hygiene
(2) may require special mouthwashes
2. Disorders of the Stomach
a. nausea and vomiting
(1) symptoms of many diseases
(2) may be caused by infectious disease, allergy, medications, etc.
(3) sometimes treated with antiemetic medications

ACTIVITIES

B. 2. Cont.

- b. gastric dysfunction (hypochlorhydria)
    - (1) lack of normal stomach secretions, usually hydrochloric acid
    - (2) can be replaced with medication
    - (3) common condition in the elderly
- c. dyspepsia - indigestion
    - (1) due to changes in lining of the stomach
    - (2) gastric secretions may be increased or decreased
    - (3) causes heartburn, feeling of fullness in stomach, irritability
    - (4) treated with medications which soothe and relax the stomach
- d. ulcer - found in stomach or small intestine (duodenum area)
    - (1) irritation of lining of stomach or duodenum progresses until a sore (ulcer) is formed
    - (2) bleeding may occur if the ulcer is near a blood vessel
    - (3) perforation (a hole in the wall) may occur and stomach contents may leak into the area outside the stomach
    - (4) medications can soothe lining, relax muscles and promote healing

3. Disorders of the Intestines

- a. diarrhea - frequent, loose bowel movements
    - (1) symptom of many diseases
    - (2) may be caused by infection, allergy, medications, tumors, etc.
    - (3) associated with cramping, gas formation

ACTIVITIES

B. 3. a. Cont.
  - (4) body fluids are lost rapidly; person may become dehydrated
  - (5) can be treated with antidiarrheal medications
- b. constipation - infrequent bowel movements
  - (1) symptom of many diseases
  - (2) may be caused by inactivity, poor diet, common problems in elderly
  - (3) stool may become hard, making elimination painful
  - (4) laxatives of various types can be given
- c. Irritable colon - irritation of areas of large intestine
  - (1) cause unknown
  - (2) symptoms are alternate diarrhea and constipation, bloating, cramping, weight loss
  - (3) anticholinergic medications sometimes used, also stool softener laxatives
  - (4) irritant laxatives should be avoided

4. Disorders of the Liver
   - a. Hepatitis - inflammation of the liver
     - (1) 2 types
       - (a) infectious hepatitis - caused by virus transmitted by contact with infected person
       - (b) serum hepatitis - transmitted by infected blood injected into a person - blood transfusions or using dirty needles (drug addicts)
     - (2) causes jaundice, fatigue, fever
     - (3) Gamma globulin given to exposed person to prevent disease - drugs not effective in treatment
   - b. Cirrhosis - chronic liver damage caused by previous disease or alcoholism

LECTURE OUTLINE

ACTIVITIES

B. 4. b. Cont.

(1) symptoms are loss of appetite, fatigue, weight loss, fever, jaundice

(2) treatment usually includes vitamins, good diet

c. Parasites

(1) Pin worms are the most common human parasitic disease in the United States

(a) small round white worms found in stool and around anus

(b) can be transmitted by hands, clothing, etc.

(c) treated with anthelmintics

C. Classifications of Medications Used in Gastrointestinal Disorders

1. Antacids, Antiflatulants - neutralize stomach acid, stop gas formation
2. Digestants - aid in digestion
3. Antidiarrheals - stop diarrhea
4. Laxatives - promote bowel action
5. Antiemetics - combat nausea and vomiting
6. Anticholinergics - decrease gastric juices, slow motion of stomach and intestines
7. Anthelmintics - kill or cause elimination of worms

D. Selected Medications by Classification

1. Antacids - Antiflatulants - neutralize acidity in stomach, stop gas formation

a. given orally to coat the lining of the stomach - should be given after meals

b. most are mixtures containing aluminum hydroxide or magnesium hydroxide

c. examples - (brand names)

(1) Gaviscon

(2) Maalox

(3) Riopan

(4) Mylanta

d. few side effects - may cause mild constipation or diarrhea

LECTURE OUTLINE

ACTIVITES

D. Cont.

2. Digestants - assist with digestion

a. hydrochloric acid, diluted (10%)

(1) given orally for achlorhydria (gastric dysfunction)

(2) replaces hydrochloric acid in the stomach

3. Antidiarrheals - stop diarrhea

a. bismuth (Pepto-Bismol) given q 2-4 h, orally

b. diphenoxylate (Lomotil) - controlled substance, given 4 times a day, orally, not to be used routinely

c. kaolin/pectin mixtures (Kaopectate) given orally after each bowel movement

d. side effects - constipation, fecal impaction

4. Laxatives - promote bowel action

a. saline laxative

(1) acts by increasing fluid in the intestine

(2) example - Milk of Magnesia

(3) usually given p.r.n.

(4) side effects - diarrhea, cramping

b. bulk laxative

(1) acts by increasing bulk in stool

(2) often given routinely

(3) examples

(a) psyllium (Metamucil, Effersyllium)

(b) methylcellulose (Hydrolose)

(4) side effects - nausea, vomiting, diarrhea, laxative dependence

c. stool softeners

(1) soften fecal material

(2) may be used routinely

(3) examples

(a) dioctyl sulfosuccinate (Surfak, Colase, Doxinate)

(b) sometimes combined with other drugs (Senokot-S, Doxan, Dialose Plus)

(4) side effects - mild cramping, laxative dependence

LECTURE OUTLINE

ACTIVITIES

D. 4. Cont.
d. Lubricants
(1) make stool slippery
(2) example - Mineral Oil, Haley's M.O.
(3) interfere with absorption of some vitamins
e. Stimulant laxatives
(1) irritate bowel lining and produce bowel action
(2) examples
(a) bisacodyl (Dulcolax, Bisacodyl) - oral, rectal
(b) danthron (Modane) oral
(3) should not be used routinely
(4) side effects - diarrhea, cramping
5. Antiemetics - drugs which stop vomiting
a. may be given orally, parenterally or by rectal suppository
b. examples
(1) prochlorperazine (Compazine)
(2) trimethobenzamide (Tigan)
c. side effects - dizziness, drowsiness
6. Anticholinergics
a. act on the sympathetic nervous system to decrease secretion of digestive juices and slow movement of the stomach
b. given for dyspepsia and ulcers
c. examples
(1) methantheline (Banthine)
(2) tridihexethyl (Pathilon)
d. side effects - headache, drowsiness, confusion
7. Anthelmintics
a. drugs which kill worms or cause them to be eliminated
b. example - pryvinium (Povan)
c. side effects - nausea, cramping, diarrhea

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

Instructor's Signature ______________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

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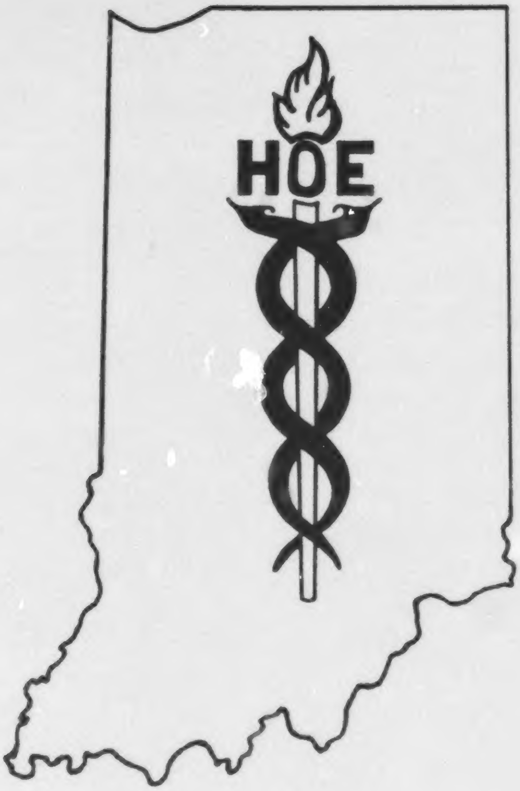
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 16

MEDICATIONS FOR THE URINARY AND MALE REPRODUCTIVE SYSTEMS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

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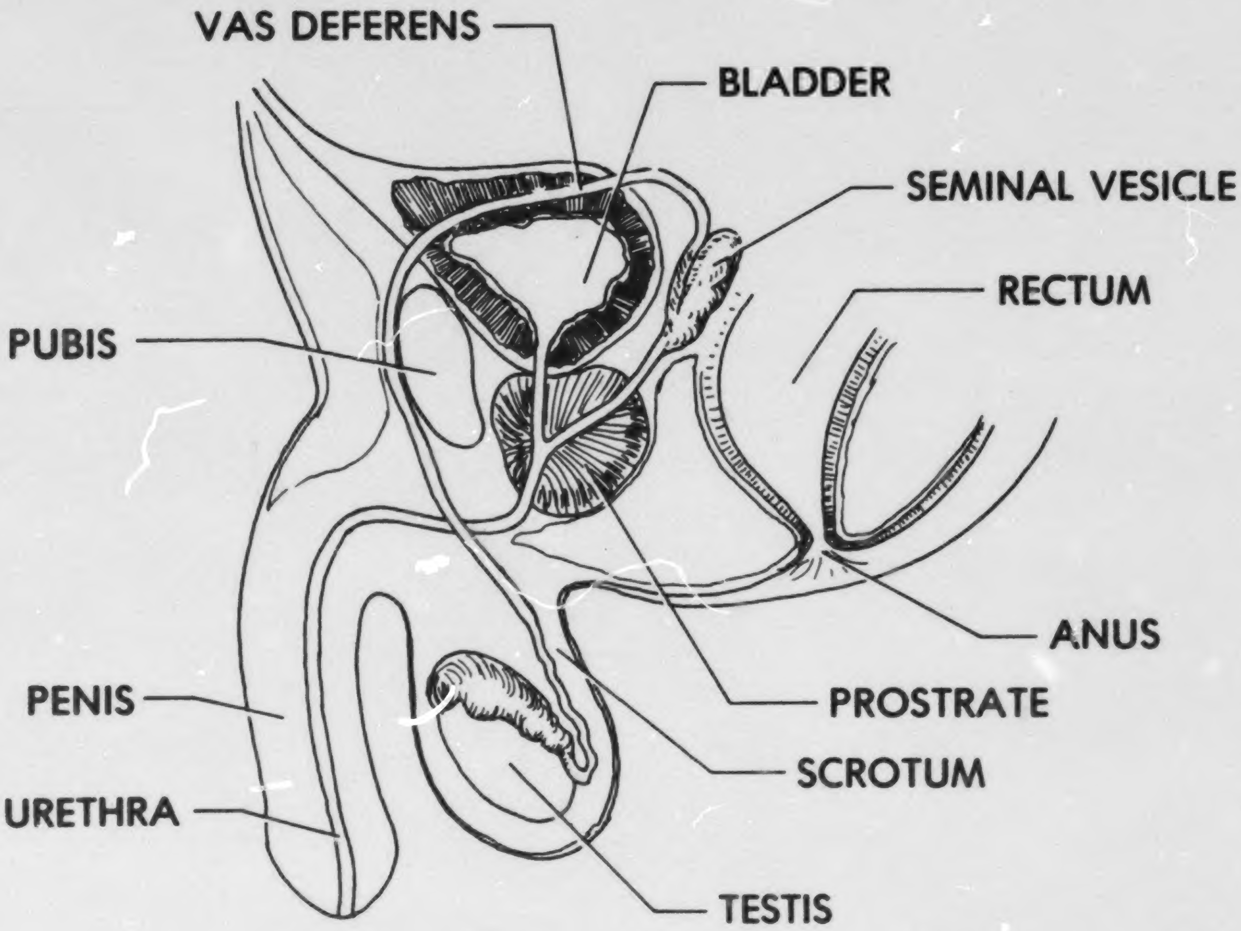
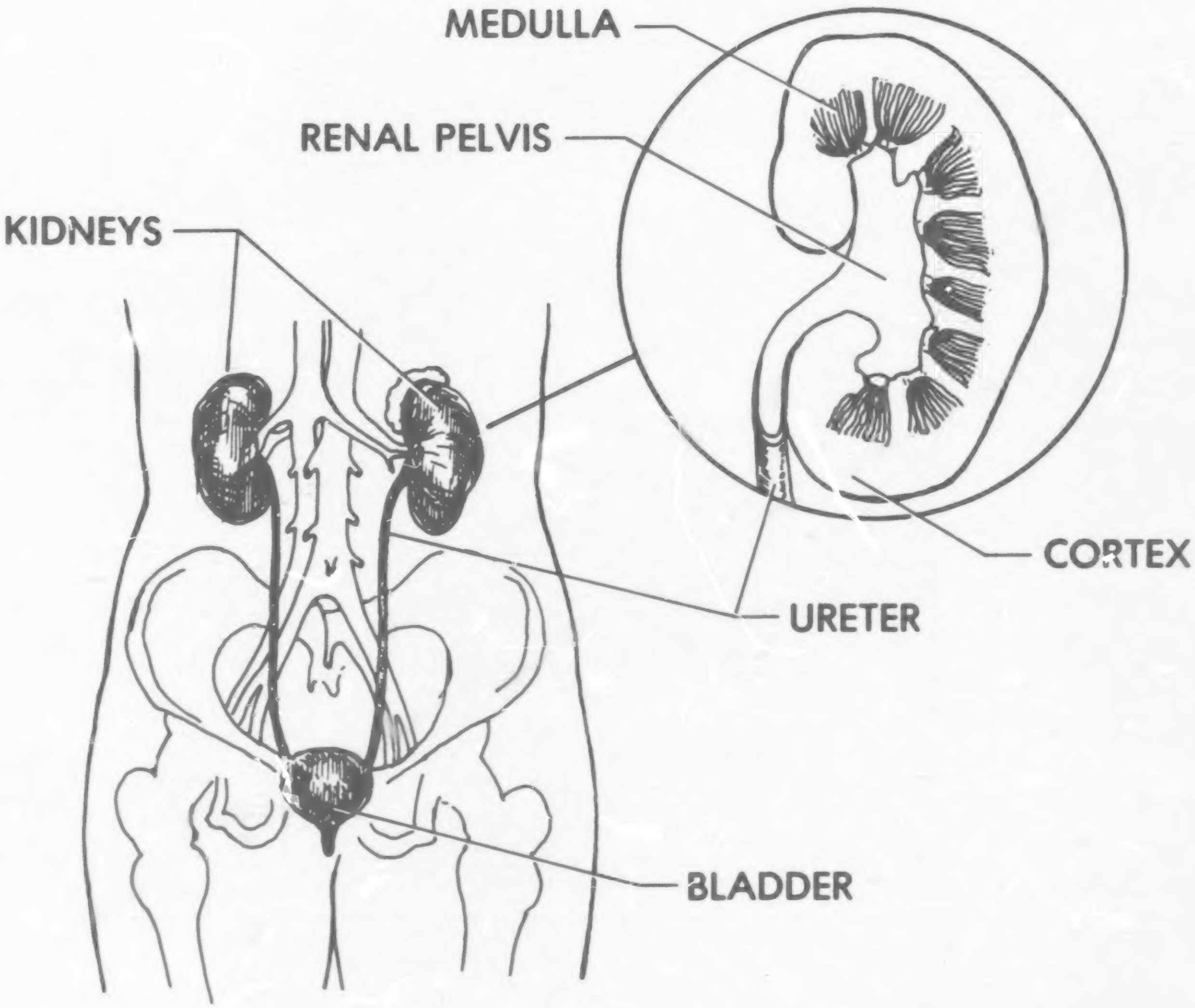
MALE REPRODUCTIVE SYSTEM


VAS DEFERENS
BLADDER
SEMINAL VESICLE
RECTUM
PUBIS
ANUS
PROSTRATE
PENIS
SCROTUM
URETHRA
TESTIS

THE URINARY SYSTEM


MEDULLA
RENAL PELVIS
KIDNEYS
CORTEX
URETER
BLADDER

FUNCTION:

PRODUCES URINE
REMOVES WASTES FROM BLOOD STREAM
MAINTAINS HOMEOSTASIS

MEDICATIONS FOR THE URINARY
AND
MALE REPRODUCTIVE SYSTEMS

GOAL

The structures that belong to the urinary system (kidneys, ureters, urinary bladder and urethra) are for the purposes of filtering (cleaning) the blood and eliminating all excess fluids and unused substances, contained in the fluids, from the body. The structures of the male reproductive system (testicles testes, scrotum, epididymis, vas deferens, seminal vesicles, prostate gland, bulbourethral glands and penis) are for the purposes of producing male hormones and sperm cells. The male reproductive system is many times studied at the same time as the urinary system because of the structures being in the same general area of the male body; the urethra of the male is used by both the male reproductive and urinary systems and sometimes disorders of one system or the other affect structures of both systems.

Injuries, disorders and aging can sometimes interfere with the filtration and elimination processes of the urinary system and hormone and sperm production of the male reproductive system. Medications may be helpful in restoring partial to complete functioning of these body processes.

Personnel administering medications for urinary and/or male reproductive structures should understand how these structures work; what common medications are ordered for urinary and male reproductive structures; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for the urinary and male reproductive systems.

TURN TO NEXT PAGE

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MEDICATIONS FOR THE URINARY
AND
MALE REPRODUCTIVE SYSTEMS

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR THE URINARY
AND
MALE REPRODUCTIVE SYSTEMS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Structure and Function of the Urinary and Male Reproductive Systems
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATIONS FOR THE URINARY
AND
MALE REPRODUCTIVE SYSTEMS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recall the two major functions of the urinary system and two major functions of the male reproductive systems

2. Recognize four common disorders of the urinary system and one common disorder of the male reproductive system in which medications are helpful

3. Identify the two classifications of urinary system medications and one of the male reproductive system with one example of each

4. Select five medications (two diuretics one urinary antiseptic and one androgen or estrogen) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics for the Nurse you are to read page 210 - 215 stopping at "Suggested Activities" on page 215 . Also read "Androgens" on pages 257 - 258. You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for the urinary and male reproductive systems (try to find medications from the different classifications listed in your text, if possible.) From your study try to find out (1) the reason for the medication, (2) the effectiveness of the medication (favorable and unfavorable.) Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Urinary and Male Reproductive Systems." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text select five (two diuretics, one urinary antiseptic, one systemic anti-infective, and one androgen or estrogen.) Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the eight medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work, who are receiving some type of medication(s) for the urinary and male reproductive systems (try to find medications from the different classifications listed in your text, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

URINARY AND MALE REPRODUCTIVE SYSTEMS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of urinary and male reproductive medications? ______________________________

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________
____
____
____

CHART STUDY

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________

   ____

   Why do you think this is so? ______________________________

   ____

   ____

4. Were there any particular side-effects that seemed common to a given classification of the urinary and male reproductive medications? ___ If so, what were they? ______________________________

   ____

   ____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture be sure to note the following:

A. Review of Structure and Function of the Urinary System and Male Reproductive System
   1. Structure of Urinary System
      a. composed of 2 kidneys, 2 ureters, a urinary bladder and the urethra
      b. kidneys
         (1) bean-shaped organs located on either side of spinal column in area of small back
         (2) very complex structure - contains over one million tiny filters in each kidney
         (3) each drop of blood passes through kidney approximately 4 - 6 times per day - for purpose of filtering (cleaning)
         (4) excess liquids and unused substances removed from blood and taken to outside as waste called urine
      c. ureters
         (1) small, thin tubes that carry urine away from kidney - about 10-12 inches long
         (2) attached to kidney at center - go down to urinary bladder in pelvis
      d. bladder
         (1) hollow, sac-like structure in pelvis for holding urine
         (2) person usually has desire to empty bladder when 250-300 cc collected
         (3) muscle walls will distend to hold 500 cc or more

LECTURE OUTLINE

ACTIVITIES

A. 1. Cont.

- e. urethra
  - (1) tube through which urine passes to outside - where connected to bladder, there is a tight muscle that opens and closes releasing urine
  - (2) short in female - 1½ inches long - about 7-8 inches in male - also serves as reproductive system in male

2. Functions of Urinary System - 2 major ones
   - a. filter (clean) blood
   - b. eliminate excess fluids and unused substances in fluid
3. Structure of the Male Reproductive System
   - a. composed of 2 testicles, 1 scrotum, 2 epididymes, 2 vas deferens, 2 seminal vesicles, 1 prostate, 2 bulbourethral glands and 1 penis
   - b. testicles - also called testes
     - (1) sex glands of male - located in pelvis cavity before birth - move down (descend) into scrotum at birth or shortly after
     - (2) full of tiny structures that produce male sex hormones - testosterone
     - (3) also has structures that produce sperm cells for reproduction
   - c. scrotum - sac-like structure which holds testicles - located behind penis
   - d. epididymis - coiled structure that stores and matures sperm cells
   - e. vas deferens (ductus deferens)
     small tube coming off testicle that goes up and over bladder and carries sperm to storage pouch

LECTURE OUTLINE

ACTIVITIES

A. 3. Cont.

- f. seminal vesicles
  pouch-like structures behind bladder where sperm is stored
- g. prostate gland
  doughnut-shaped structure below the bladder (surrounding urethra) - adds alkaline substance to sperm
- h. bulbourethral glands
  small structures about halfway between bladder and end of penis that secretes sperm protectant
- j. penis
  cylinder-shaped structure on outside of body - houses external portion of urethra - male organ of copulations (intercourse)

4. Functions of Male Reproductive System
   - a. produce hormone (testosterone) necessary to have male secondary sex charateristics - begins in puberty - slows down with aging process
   - b. produce sperm (male sex cell) necessary for reproduction

B. Common Disorders of the Urinary and Male Reproductive Systems.

1. Cystitis
   - a. inflammation of the urinary bladder
   - b. usually due to infection with bacteria
   - c. a common problem in patients with catheters
   - d. symptoms are cloudy urine, frequent urination, burning, painful urination, sometimes fever and chills if severe
   - e. treated with anti-infectives, urinary antiseptics
   - f. cranberry juice is also helpful in treatment

ACTIVITIES

B. Cont.
    2. Pyelonephritis
        a. infection of the kidney - may follow infection elsewhere in the body
        b. symptoms are chills, fever, nausea, cloudy urine, back pain
        c. treated with medications to kill bacteria causing infections (antibiotics, sulfas)
    3. Chronic Kidney Failure
        a. reduction in kidney function - waste products from cells are no longer eliminated properly
        b. common problem in the aged
        c. requires careful use of drugs - they may accumulate in the body causing toxicity
    4. Generalized Edema
        a. a condition of swelling (fluid accumulation) usually of feet and legs, lungs, etc.
        b. a symptom of several diseases such as kidney failure, heart failure
        c. often treated with diuretic drugs
    5. Benign Prostatic Enlargement
        a. very common problem in men over 60
        b. causes difficult, painful urination, dribbling
        c. if not treated may cause kidney disease
        d. treatment is surgical removal of all or part of the prostrate gland
    6. Cancer of the Prostate Gland
        a. symptoms are the same as benign prostatic enlargement - also pain in back and legs
        b. treatment may be surgical removal, medication or both
        c. medications given are estrogens

LECTURE OUTLINE

ACTIVITIES

- C. Classifications of Medications used in Urinary Tract and Male Reproductive Disorders
  - 1. Urinary Antiseptics - destroy or inhibit growth of disease-producing organisms in the urinary tract
  - 2. Other anti-infectives - combat infection with disease producing organisms which affect the urinary tract
  - 3. Diuretics - increase excretion of water
  - 4. Androgens - male hormones
  - 5. Estrogens - female hormones
- D. Selected Medications by Classification
  - 1. Urinary antiseptics - prevent growth of disease-producing organisms in the urinary tract
    - a. examples
      - (1) nalidixic acid (Negram)
        - may be used long-term
        - side effects - drowsiness, headache
      - (2) nitrofurantoin (Furandantin)
        - side effects - nausea, vomiting, dizziness
  - 2. Systemic anti-infectives effective in urinary tract disease - kill or stop growth of disease-causing bacteria
    - a. examples
      - (1) co-trimoxazole (Bactrim, Septra)
        - a. a sulfa drug
        - b. should be given with lots of fluids
        - c. side effects - rash, itching, nausea
      - (2) cephalexin (Keflex)
        - a. side effects - nausea, headache
        - b. clinitest may show false positive during treatment with Keflex
  - 3. Diuretics - increase excretion of water
    - a. some diuretics cause elimination of potassium from the body - must be replaced (K-lor, K-Lyte)
    - b. side effects are low blood pressure, weakness, dizziness and dehydration
    - c. examples
      - (1) chlorothiazide (Diuril) - oral, I.V.
      - (2) furosemide (Lasix) - oral, I.V., I.M.
      - (3) metolazone (Zaroxolyn) - oral
  - 4. Androgens - male hormones
    - a. aid in development of male sex characteristics - body and facial hair, deep voice, muscle development
    - b. used to promote weight gain, treat impotence, and male climacteric (change of life)
    - c examples
      - (1) testosterone (Androgen, Oreton)
        - a. side effects - edema, change in appetite
        - c. given orally (buccal) or I.M.

LECTURE OUTLINE

ACTIVITIES

D. Cont.
  5. Estrogens - female hormones
    a. aid in relieveing symptoms of cancer of the prostate also used to reduce menopausal symptoms in women
    b. side effects fluid retention, mental depression, breast engorgement
    c. given orally or I.M.
    d. example - diethylstilbestrol (Des, Stilbestrol)

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

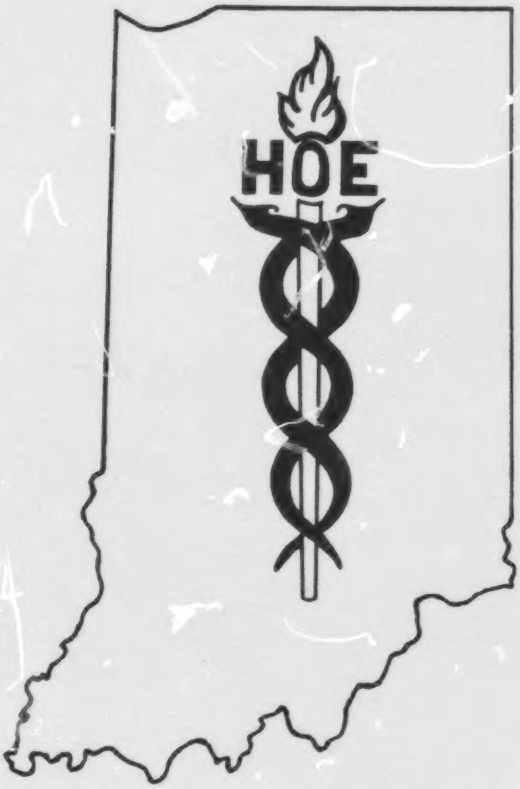
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

A - 9 - 17

MEDICATIONS FOR THE ENDOCRINE
AND
FEMALE REPRODUCTIVE SYSTEMS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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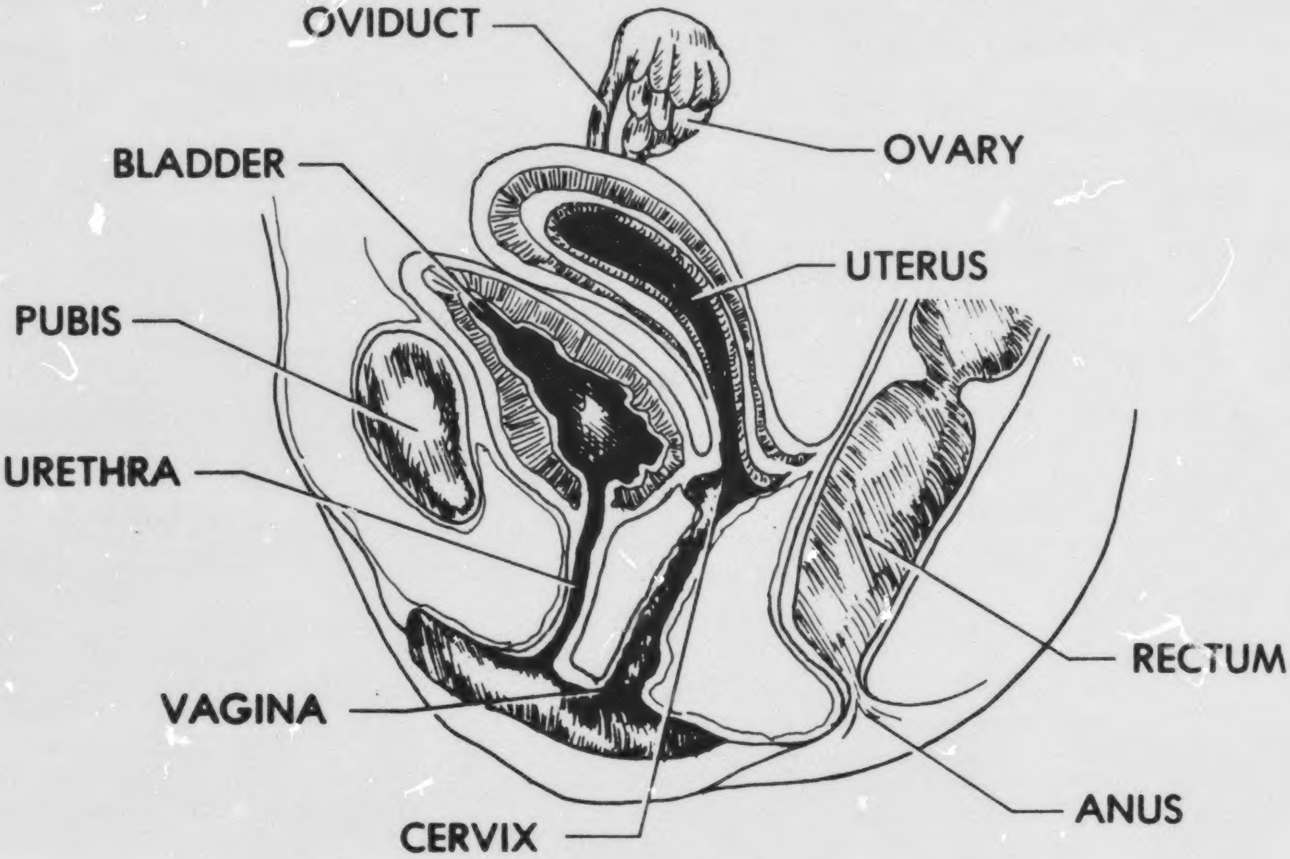
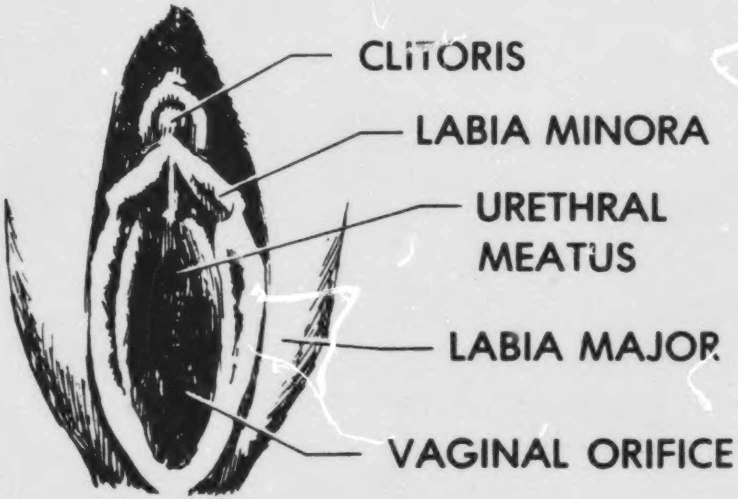
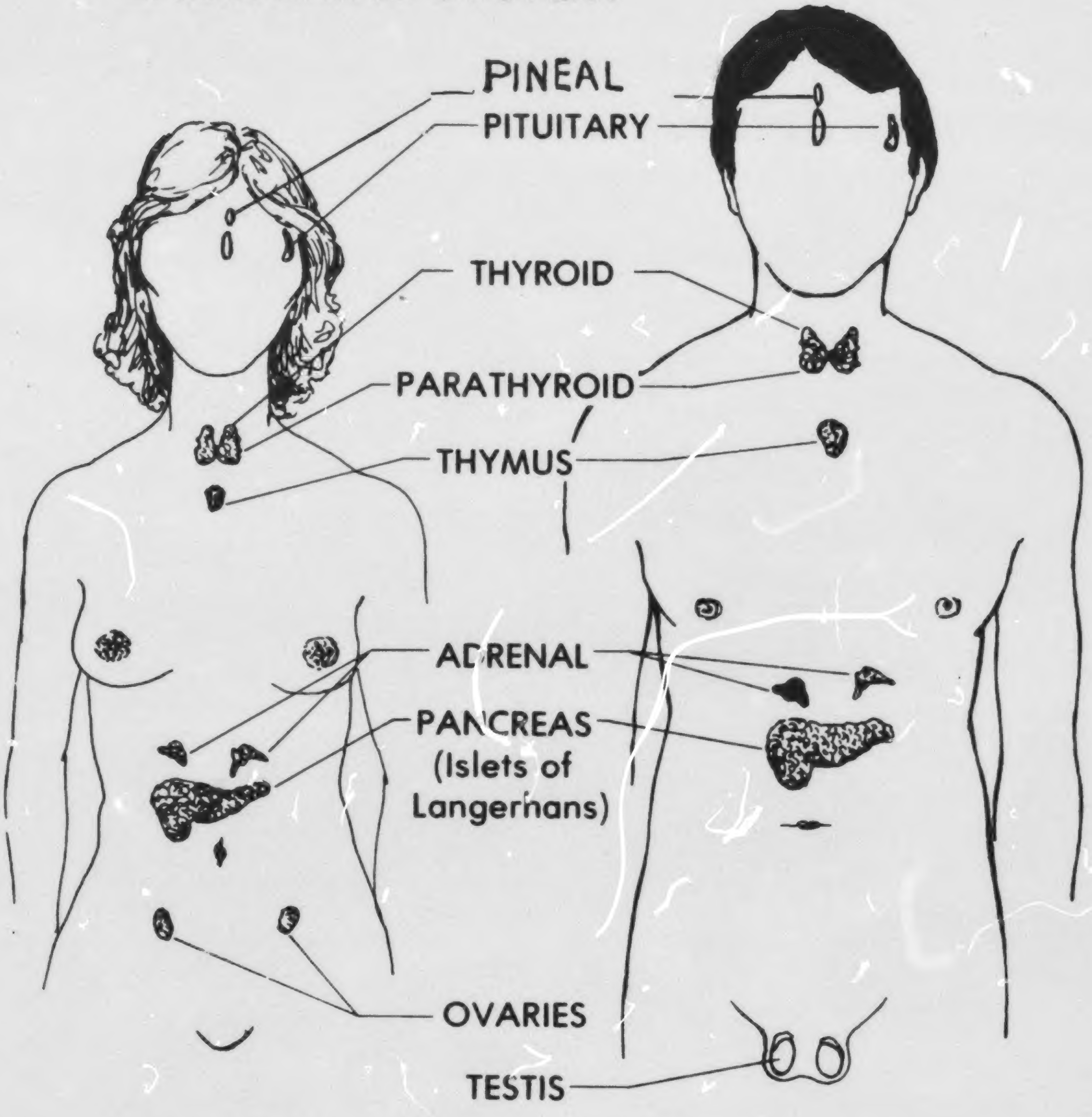
FEMALE REPRODUCTIVE SYSTEM

FUNCTION: REPRODUCES ORGANISMS LIKE ITSELF


OVIDUCT
OVARY
BLADDER
UTERUS
PUBIS
URETHRA
RECTUM
VAGINA
ANUS
CERVIX


CLITORIS
LABIA MINORA
URETHRAL MEATUS
LABIA MAJOR
VAGINAL ORIFICE

ENDOCRINE SYSTEM


PINEAL
PITUITARY
THYROID
PARATHYROID
THYMUS
ADRENAL
PANCREAS
(Islets of Langerhans)
OVARIES
TESTIS

FUNCTION:

SECRETES HORMONES TO REGULATE BODY PROCESSES OF GROWTH AND DEVELOPMENT,

REGULATES BODY FUNCTIONS, METABOLISM AND REPRODUCTION

MEDICATIONS FOR THE ENDOCRINE
AND
FEMALE REPRODUCTIVE SYSTEMS

GOAL

The endocrine system is composed of eight different glands or sets of glands (namely: the pineal, pituitary, parathyroids, thyroid, thymus, adrenals, islets of Langerhans and gonads.) These glands, situated throughout the body, all secrete liquid substances called hormones. Each gland or set of glands secretes one or more different hormones and the hormones are the chemical regulators of cell activity within the body. The female reproductive system is composed of 2 ovaries, 2 fallopian tubes, the uterus, vagina, external genitalia and breasts. The female reproductive system is for the purpose of stabilzing the female physically and emotionally, provides female sex cells and a place for conception, plus housing and nourishment for a developing baby. The female reproductive system is many times studied at the same time as the endocrine system because of the interaction between several hormones of the endocrine system and the ovaries.

Possible disorders, injuries and the aging process may all make it necessary for people to have medications ordered specifically for the treatment of endocrine and/or female reproductive system problems. Personnel administering medications for these two systems should understand how their structures work; what common medications are ordered for the endocrine and female reproductive systems; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medication for the endorcine and female reproductive systems.

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MECICATIONS FOR THE ENDOCRINE
AND
FEMALE REPRODUCTIVE SYSTEMS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Structure and Function of the Endocrine and Female Reproductive Systems
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

295

MEDICATIONS FOR THE ENDOCRINE
AND
FEMALE REPRODUCTIVE SYSTEMS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recall the one major function of the endocrine system and the three major functions of the female reproductive system

2. Recognize four common disorders of the endocrine system and four common disorders of the female reproductive system in which medications are helpful

3. Identify five classifications of the endocrine system medications with one example of each

4. Select five medications (one pituitary hormone, one thyroid medication, one adrenal hormone, one diabetic medication and one female hormone) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's *Medications and Mathematics for the Nurse* you are to read page 218 - 225 stopping at "Suggested Activities" on page 225 . Also read pages 254 - 259, stopping at "Review" on page 259 . You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least four different patients, in the area where you work, who are receiving some type of medications for the endocrine and female reproductive systems (try to find medications from the different classifications listed in your text, if possible.) From your study try to find out (1) the reason for the medication, (2) the effectiveness of the medications (favorable and unfavorable). Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Endocrine and Female Reproductive Systems". Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text and in the lecture outline select five (one pituitary hormone, one thyroid medication, one adrenal hormone, one diabetic medication and one female hormone). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the five medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least four different patients in the area where you work, who are receiving some type of medication(s) for the endocrine and female reproductive system (try to find medications from the different classifications listed in your text, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

ENDOCRINE AND FEMALE REPRODUCTIVE MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
4.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of endocrine and female reproductive medications? ______________________________

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________________
____
____
____

CHART STUDY

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________

   ____

   Why do you think this is so? ______________________________

   ____

   ____

4. Were there any particular side-effects that seemed common to a given classification of the endocrine or female reproductive medications?

   ____

   If so, what were they? ______________________________

   ____

   ____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture be sure to note the following:

A. Review of Structure and Function of the Endocrine and Female Reproductive Systems
   1. Structure of Endocrine System
      a. composed of 8 different glands or sets of glands throughout body
      b. all glands secrete one or more chemical liquids called hormones - little known about them before 1900
      c. the glands include:
         (1) the pineal
         small gland slightly above and behind pituitary - hormone released - no known use for hormone
         (2) pituitary
         at base of brain - size of pea - has 2 parts - secretes 6 hormones from front portion - 2 from back portion - 5 hormones from front (anterior) portion stimulate other endocrine glands - 6th hormone responsible for growth of person - 2 hormones of back (posterior) portion - stimulate internal muscle action of certain organs called the "master" gland - can over or underproduce all hormones
         (3) thyroid
         largest endocrine gland - in front of neck - just below voice box - secretes hormone (thyroxin) which regulates rate cells burn foods - can overproduce or underproduce - causing different disorders

ACTIVITIES

A. 1. c. Cont.

(4) parathyroids

small glands (usually 4) each about size of grain of rice. located on back surface of thyroid - secrete hormone, parathormone, which regulates amount of calcium and phosphorus in blood - can over or underproduce and cause different problems

(5) thymus

located behind breastbone - fairly large during childhood - begins to disappear at puberty - little known about it - hormone thought to be connected with immunity during childhood possibly growth, too)

(6) adrenal glands

two - one located on top of each kidney - has two parts, center and outer layer - middle portion secretes hormone epinephrine (adrenalin) known as "flight or fright" hormone - gives stimulation for emergencies - outer portion secretes 3 groups of hormones called "corticosteroids" - corticosteroids help control metabolism of protein, fat and carbohydrates, influence fluid and mineral balance, and reduce inflammation symptoms - can have over or underfunctioning

(7) islets of Langerhans -

small, "island-like" cells within the Pancreas - produce hormone "insulin" - insulin vital to using of sugars in body cells - helps maintain normal sugar level in blood - can have over or

LECTURE OUTLINE

ACTIVITIES

A. 1. c. (7) Cont.
underproduction of insulin

(8) gonads or sex glands
testes in the male (see A-9-16, part A. 3. of lecture outline) - ovaries in female (see part A. 3. of this module)

2. Functions of Endocrine System
One major function - glands secrete substances called hormones that are the chemical regulators of all cell activity

3. Structures of Female Reproductive System

a. some structures are internal; some are external

b. structures of system do not function or are not used before puberty - stop functioning as age progresses

c. internal structures consist of:

(1) 2 ovaries
one on either side of uterus - located in pelvis - size and shape of almond - contain all egg cells female will have - 2 hormones from pituitary stimulate ovary (starting with puberty)- ovary releases hormone - estrogen - that causes characteristics - also mature approximately one egg each month - when egg mature - sac-like structure egg is in, breaks - egg released - sac-like structure produces hormone - progesterone which will stabilize pregnancy if egg is fertilized by sperm - hormones come and go in cycle unless pregnancy occurs - can be too little hormone produced - causing problems in cycle

ACTIVITIES

A. 3. c. Cont.

(2) 2 fallopian tubes
very small tube-like structures - open on end close to ovaries - attached to uterus on other end - catch mature egg when released from ovary - carry egg toward uterus - sperm usually unite with egg in fallopian tube

(3) uterus
small pear-like structure 1" X 2" X 3" - deep in pelvic cavity - almost entirely muscle - capable of stretching 500 times normal size - inner lining capable of becoming thick and rich in blood supply - egg cell carried by fallopian tube to here - if fertilized, egg will attach itself and develop into new life - if unfertilized, egg and build-up of inner lining shed in monthly flow "menstruation"

(4) vagina
short, tract-like area - sometimes called "birth" canal" opens to outside - organ of intercourse (copulation) - if egg not fertilized, it and lining of uterus will be shed through vagina to outside "menstrual flow" - lining of vagina can be infected from above or below - infection that enters vagina can spread up into uterus - into tubes and out into pelvic cavity

ACTIVITIES

A. 3. Cont.

d. external structures consist of 2 sites

(1) genital area

(a) mons pubis - fatty pad over pubic bones - covered with pubic hair after puberty

(b) labia - 2 lip-like structures or folds of fat and skin - extend downward toward rectal opening

(c) clitoris - upper junction of labia - small structure of erectile tissue

(d) vestibule area of vaginal opening and opening to urethra

(e) area can become infected from poor toilet or bathing habits

(2) chest area

breasts or mammary glands - stimulated by hormones of pregnancy to produce milk after childbirth - breasts enlarge with pregnancy - may over or underproduce milk - can become "engorged" and painful

4. Functions of Female Reproductive System

a. stabilize the female physically and emotionally through hormone production

b. provide a place for conception or fertilization

c. house and nourish a developing baby

B. Common Disorders of the Endocrine and Female Reproductive Systems For Which Medication Is The Treatment

LECTURE OUTLINE

ACTIVITIES

B. Cont.

1. Endocrine Conditions
    a. Hyper (over) or Hypo (under) functioning of Pituitary Gland can cause many things to happen - dwarfism, giantism, Diabetes Insipidus (no water retention), poor functioning of other endocrine glands, etc. Medication (hormones) might be used for "under" functioning depending upon gland affected
    b. Hyperthyroidism
    over-functioning thyroid - patient has symptoms of over-activity, sleeplessness, rapid pulse, thin, voracious appetite, exophthalmus (bulging eyes), difficult swallowing, enlarged thyroid giving neck swollen appearance - medication with iodine and potassium together may be helpful - treatment is often surgical removal of part of thyroid gland.
    c. Hypothyroidism
    under-functioning thyroid - patient directly opposite - may be sluggish physically and mentally, overweight, dry skin, coarse hair - possibly falling out, may be chronically constipated - treated with daily thyroid preparation
    d. Diabetes Mellitus
    most common of all endocrine disorders - over 3 million people in United States have it - low or non-functioning islets of Langerhans - makes level of sugar in blood too high - person has symptoms of weight loss, excess thirst, large quantities of urine, itchy, dry skin, sugar in urine, itching in genital region, night sweats, etc. - may be controlled by oral medications or injections of hormone "insulin" - can have serious complications if out of control

ACTIVITIES

B. 1. Cont.

e. Addison's Disease

condition of adrenal glands in which there is an underproduction of adrenal hormones - it is characterized by anemia, weight loss, dehydration, thinning of hair, tremors and bronze coloring of skin - all due to imbalance in fluids and mineral particles in blood - by taking corticosteroids, avoiding stress, patient may live fairly normal life - can have serious complications if not under control

2. Female Reproductive Conditions

a. Premature or Severe Menopause

condition in which woman ceases to have female hormones present in normal cycle - can begin to occur normally from around age 45-50 years - may give minor discomfort - but if premature due to surgery, shock, illnessses, etc., can cause anxiety, depression, irregular or heavy menstrual flow, severe "hot and cold flashes," etc. - when extreme discomfort of patient - estrogen therapy can be used

b. Vaginitis

inflammation of the vaginal tract - usually due to infection - whitish vaginal discharge, bad odor, burning and itching of the genital area, particularly the urethral opening and urethra - many times infection comes from mate or poor hygiene habits - may be very difficult to cure - area must be kept clean and dry at all times (if possible) - jellies, creams, suppositories and douches are often used to help cure

ACTIVITIES

B. 2. Cont.

c. Breast Cancer

most common form of cancer in women, over 60,000 women develop breast cancer each year - over 50% are cured (at least for 5 years) - percentage would be higher if women would report symptoms early - symptoms can vary - according to type of cancer - any unusual change in breast should be reported - more common symptoms include - lump in breast, "dimpling" or indented areas, oozing from nipples of non-nursing woman, "orange-peel" effect of breast surface, etc. - treatment may include surgery, x-ray radiation or chemotherapy (drugs).

d. Uterine Dystocia

at time of delivery of baby - uterus should contract with increasing strength and frequency to slowly open uterus and carry baby down and out birth-canal - any difficulty in labor - due to size of baby, irregularity of contractions, size or shape of pelvis, etc. - called "Dystocia" - if not strong or regular - hormone of back (posterior) part of pituitary may be given

C. Classifications of Medications Used in Disorders of the Endocrine and Female Reproductive Systems

1. Endocrine Medications
   - a. Posterior Pituitary Hormone
   - b. Adrenal Cortex Hormones
   - c. Thyroid Hormones
   - d. Gonadal Hormones
     - (1) Estrogens
     - (2) Progesterones
     - (3) Androgens
     - (4) Oral contraceptives

ACTIVITIES

C. 1. Cont.
    e. Medications Affecting Islets of Langerhans
        (1) Insulin (Pancreas hormone)
        (2) Oral Hypoglycemics (Antidiabetics)
D. Selected Drugs by Classification
    1. oxytocin (Pitocin) - Posterior Pituitary Hormone
        a. used to stimulate and maintian labor
        b. given I.M. or I.V.
    2. Adrenal Cortex Hormones
        a. Used to treat Addison's disease
        b. Also used in allergies, arthritis, etc., to reduce inflammation
        c. May be given orally, parenterally, topically
        d. Side effects - moon face, fluid retention, depression, bruising, poor wound healing, thin, shiny skin
        e. Examples
            (1) prednisone (Deltasone, Meticorten) - oral
            (2) dexamethasone (Decadron) oral, parenteral
            (3) hydrocortisone (Cortef) oral
        f. may cause serious reaction if stopped suddenly
    3. Thyroid hormones
        a. used as replacement when thyroid is not producing enough
        b. affect use of food substances by the body cells, affect growth and development
        c. side effects - nervousness, rapid pulse, insomnia, tremors
        d. examples
            (1) levothyroxine (Synthroid) - oral, parenteral
            (2) liothyronine (Cytomel) oral

ACTIVITIES

D. Cont.

4. Gonadal hormones
    a. Estrogens - female hormone
        (1) maintain normal menstrual cycle, maintain secondary sex characteristics
        (2) used in replacement therapy for severe symptoms of menopause
        (3) sometimes used to treat symptoms of cancer of prostate and breast
        (4) side effects are depression, loss of hair, thrombophlebitis, breast tenderness
        (5) examples
            a. diethylstilbestrol (DES) - oral, suppository
            b. chlorotrianisene (Tace) - oral, parenteral
    b. Progesterones
        (1) a female hormone which prepares the uterus for pregnancy
        (2) used in birth control pills, for uterine bleeding, and advanced cancer of the uterus
        (3) side effects are rash, headache, depression, weight gain
        (4) example - medroxy progesteron (Provera) - oral
    c. Androgens - male hormone
        (1) cause male secondary sex characteristics, also stimulate repair of body tissues
        (2) used to reduce symptoms in advanced cancer of breast
        (3) side effects - headache, depression, growth of facial hair
        (4) example - testosterone (Oreton) oral, parenteral

ACTIVITIES

- D. 4. Cont.
  - d. Oral Contraceptives
    - (1) prevent pregnancy
    - (2) combination of estrogen and androgen
    - (3) side effects - headache, weight gain, hypertension, thrombophlebitis
    - (4) examples - Enovid, Ortho-Novum
- 5. Medications affecting Islets of Langerhans
  - a. Insulin - assists cells in using carbohydrates
    - (1) used to provide insulin to the body when it is not produced by the Islets of Langerhans
    - (2) always given parenterally - never oral
    - (3) several types available
      - (a) rapid acting - regular
      - (b) intermediate acting - lente
      - (c) long acting - ultralente
    - (4) side effects - perspiration, irritability, drowsiness
  - b. Oral Hypoglycemics (Antidiabetics)
    - (1) stimulate Islets of Langerhans cells to produce insulin and lower blood sugar
    - (2) given orally
    - (3) side effects - headache, irritability, fatigue, hunger
    - (4) examples
      - (a) acetohexamide - (Dymelor)
      - (b) chlorpropamide - (Diabinese)
      - (c) tolbutamide - (Orinase)

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35

MODULE

A - 9 - 18

MEDICATIONS FOR THE SKIN

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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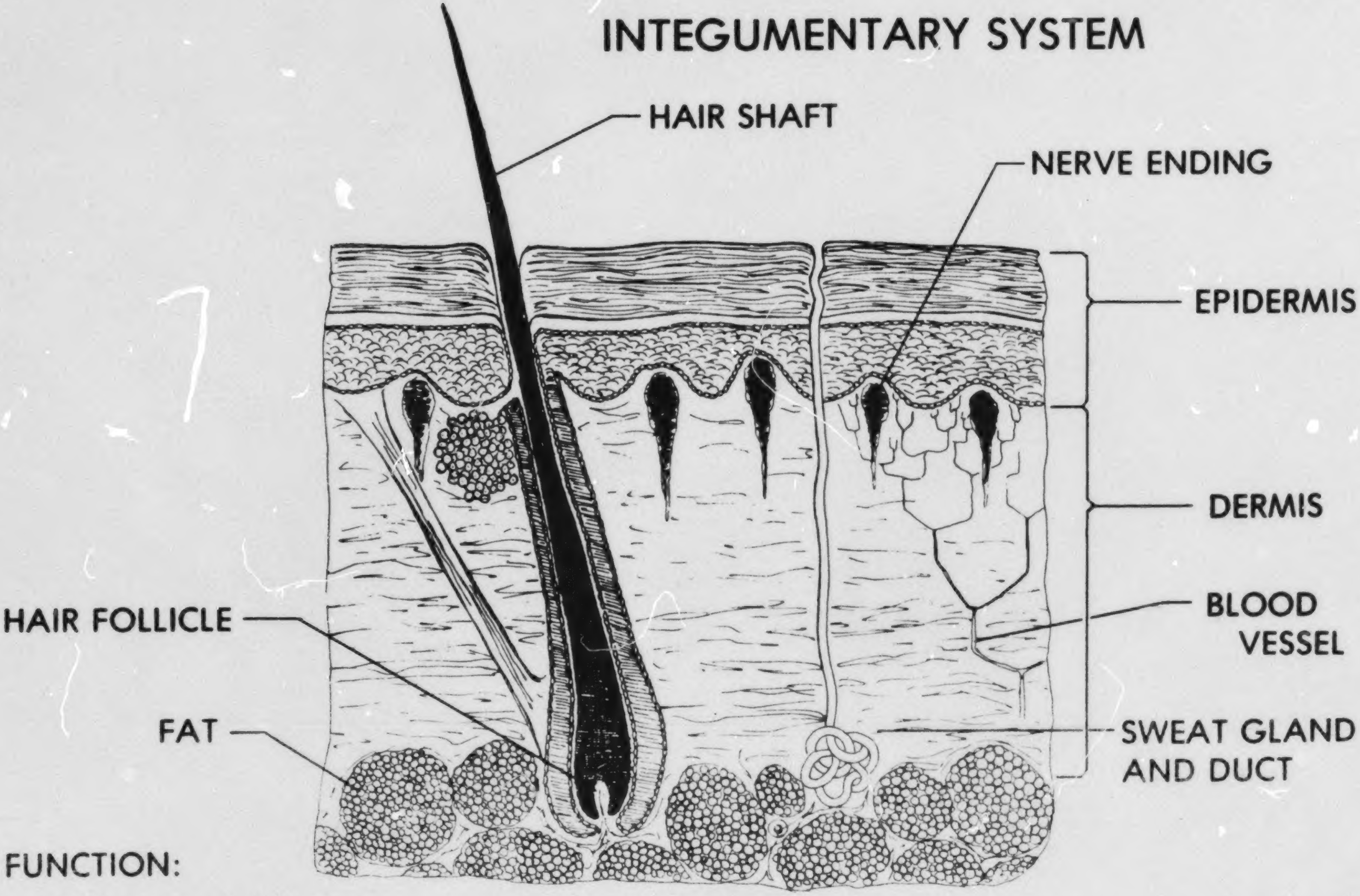
INTEGUMENTARY SYSTEM


HAIR SHAFT
NERVE ENDING
EPIDERMIS
DERMIS
BLOOD VESSEL
HAIR FOLLICLE
FAT
SWEAT GLAND AND DUCT

FUNCTION:

- PROTECTS THE BODY
- REGULATES TEMPERATURE
- DISCHARGES WASTE
- MANUFACTURES VITAMIN D
- MAKES HUMAN APPEARANCE PRESENTABLE

MAJOR ORGAN: SKIN

MEDICATIONS FOR THE SKIN

GOAL

The skin is the largest organ of the body. It serves as a protective covering for all other body parts and contains sensing devices for heat, cold, pain and texture.

The skin can be affected by injury, irritation, disease and the aging process, which may make medications necessary from time to time. Personnel administering medications for the skin should understand how the structure works; what common medications are ordered for the skin; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for the skin

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR THE SKIN

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Structure and Function of the Skin
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATIONS FOR THE SKIN

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recall the four major functions of the skin
2. Recognize eight common conditions/disorders of the skin and one medication that might be administered for each one
3. Identify the six classifications of the skin medications
4. Select six medications (one for each classification) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

There is no reference reading in your text for this module. However, each student should examine the material in the lecture outline before doing the chart study and attending the lecture. Underline any area you do not understand or have questions about.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for the skin (try to find medications from the different classifications listed in your lecture outline, if possible.) From your study try to find out (1) the reason for the medication, (2) the effectiveness of the medications (favorable and unfavorable). Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For The Skin". Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your lecture select six (at least one from each classification). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the six medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work, who are receiving some type of medication(s) for the skin (try to find medications from the different classifications listed in your lecture, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

SKIN MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of skin medications? ____________

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________________
____
____
____

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? ____ If so, which one(s)? ______________________________

____

Why do you think this is so? ______________________________

____

____

4. Were there any particular side-effects that seemed common to a given classification of the skin medications? ______________________

If so, what were they? ______________________________________

____

____

LECTURE OUTLINE

ACTIVITIES

A. Structure and Function of the Skin

1. Structure of Skin
   a. the skin is the largest organ in the body - covers every surface except for openings to the outside
   b. varies in thickness from 1/30 to 1/3 inch - thinnest is on face - thickest on palms of hands and soles of feet
   c. consists of two layers
      (1) epidermis
      outer layer - protects layer beneath - old cells constantly being rubbed off
      (2) dermis
      lower layer - sometimes called "the true skin" - composed of live cells, nerve endings, blood vessels, sweat glands, hair sacs with hairs, oil glands and some fat cells (at the ends of the fingers and toes - there are nails that are an extension of the skin) and pigment for skin coloring
   d. directly beneath the skin is a thick area of fat cells called the "subcutaneous" layer
2. Functions of the skin
   a. very important to body - has four functions
   b. functions include:
      (1) protection of all underlying structures
      (2) reception of sensations of heat, cold, pain and texture
      (3) absorption of substances applied
      (4) excretion of certain waste products (through perspiration)

ACTIVITIES

A. 2. Cont.

   c. with many blood vessels found in skin layer - anything absorbed can be taken to area needed

   d. break in skin can mean loss of protection of underlying structures

B. Common Conditions (Disorders) Of The Skin

   1. Urticaria

      commonly called "hives" - appears suddenly - characterized by raised, pinkish, swollen areas, "welts" that itch and smart (can be small or very large) - can be any place on skin - usually due to allergic reaction - can be something touched, eaten, injected - can be mild or very serious - if very serious, edema may invade tissues of eyes, mouth, nose, voice box, windpipe, etc. - mild cases treated with soothing lotions - severe cases may need oral or parenteral medications - antipruretics

   2. Scabies

      commonly called "seven year itch" - caused by specific mites that burrow under skin - mites contaminate person from bed clothing, undergarments, etc. - take one to two months to show up after entering body - appear as tiny water blisters, particularly between fingers - spreads rapidly - itches severely - skin must be treated - bedding and garments must be disinfected - special topical medications called "Scabicides" have been developed to destroy mites

ACTIVITIES

B. Cont.

3. Pediculosis

commonly called "lice" - three types - hair, body and pubic-usually come from poor personal hygiene, use of contaminated articles by another person - used to be extremely hard to get rid of - now have topical medications that destroy lice and eggs called "Pediculicides"-all person's clothing, combs, bedding, etc. need to be clean at time of treatment.

4. Athlete's Foot

fungus growth, highly contagious, attacks skin between toes, can spread to rest of foot and up legs if bad; watery blisters form - become weepy - burn, itch, causes skin to crack; germ lives in warm, damp places - shower rooms, public baths, etc. - medications must be specific to kill fungus in order to work - may be powders or ointments

5. Psoriasis

chronic condition of skin (dermatitis) in which skin has red patches covered with silvery scales which have tendency to shed - skin surface may have pinpoint bleeding when scales come off - cause unknown - skin flare-ups sometimes accompany rheumatoid arthritis of fingers and toes - may be treated by topical medications to help scaling - oral medications may be necessary if severe

ACTIVITIES

B. Cont.

6. Eczema

condition of the skin (dermatitis) which is characterized by patches on skin which are first blister-like - then ooze - then become "crusty" or hardened on the surface - itching is very common - scratching aggravates condition - cause of eczema internal or external is usually due to allergic reaction - medications can be applied to relieve itching - help clear up crusting - major treatment, however, should be to find cause of irritation and remove it from the afflicted person (sometimes difficult to find cause)

7. Burns

injury to skin caused by strong chemicals, electricity, high temperatures or radiation - severity of burns depends upon size of area covered and depth of burn - the method of measuring depth of burn is to refer to burn as first degree (involves only the skin), second degree (involves skin and fatty layer) and third degree (skin and fatty layer destroyed with damage to lower tissues - possibly to the bone)

first degree burns - skin area is red

second degree burns - skin blistered

third degree burns - skin may appear charred or pearly white

if medication is a part of treatment, the type of medication used depends upon the type of burn - when skin is broken, tissues underneath must be protected from germs

ACTIVITIES

B. Cont.
  8. Decubitus
    also called "bed sores" - reddened areas of the skin due to pressure of body part against rigid surface, such as, bed, chair, another part of body - lack of circulation causes skin and underlying tissues to be without oxygen and nutrition - death to area of skin and tissues can occur - area begins to "weep" then starts dying and coming out - prevention best thing - but once patient has decubitus, needs medications that will prevent infection and promote healing, sometimes debridement medications are used to remove dead tissues

C. Classifications of Medications Used for Skin Disorders
  1. Local Anti-infectives
  2. Scabicides and Pediculicides
  3. Anti-inflammatory Medications
  4. Antipruritics and Local Anesthetics
  5. Protectants
  6. Debridement Medications

D. Selected Medications by Classification
  1. Local anti-infectives - medications containing antibiotics, sulfonamides, or antifungal agents to treat skin infections.
    a. applied locally
    b. examples
      (1) tolnaftate (Aftate, Tinactin) used for fungal infections such as athlete's foot. No side effects
      (2) neomycin (Neocin) used for bacterial infections
        Side effect - rash
      (3) clotrimazole (Lotrimin) used for fungal infections
        Side effect - itching, redness

LECTURE OUTLINE

ACTIVITIES

D. Cont.
  2. Scabicides and pediculicides - kill scabies, mites and lice
    a. applied to skin or hair (as shampoo)
    b. side effects - skin irritation
    c. examples
      (1) lindane (Kwell) kills both scabies and lice - requires prescription
      (2) A-200 Pyrinate
          non-prescription drug effective for lice (pediculicide)
  3. Anti-inflammatory medications
    a. drugs used on the skin to reduce inflammation
    b. all contain corticosteroids (see Module 17)
    c. side effects are burning, itching, and dryness
    d. examples
      (1) betamethasone (Valisone) cream, lotion
      (2) flurandrenolide (Cordran) cream, lotion
      (3) triamcinolone (Aristocort, Kenalog) cream, lotion ointment, spray
  4. Antipruritics and local anesthetics
    a. relieve itching and pain in local area
    b. supplied in ointments and lotions; applied locally - side effects rare
    c. examples
      (1) Benzocaine (Solarcaine, Americaine)
      (2) Dibucaine (Nupercainal) - used for hemorrhoids
      (3) Caladryl lotion - also contains antihistamine drug and protectant
  5. Protectants
    a. cover and protect skin
    b. used for skin irritations, dryness, allergies
    c. examples
      (1) calamine - lotion, liniment, ointment
      (2) petrolatum (Vaseline)
      (3) zinc oxide - ointment, cream
    d. no side effects
  6. Debridement Medications
    a. destroy dead (necrotic) tissue
    b. used in burns and decubitus ulcers to clean out dead tissue
    c. side effects - none
    d. examples
      (1) lytic ensymes - (Elase) ointment
      (2) collagenase - (Santyl) ointment
      (3) dextranomer - (Debrisan) ointment

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

Instructor's Signature ______________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

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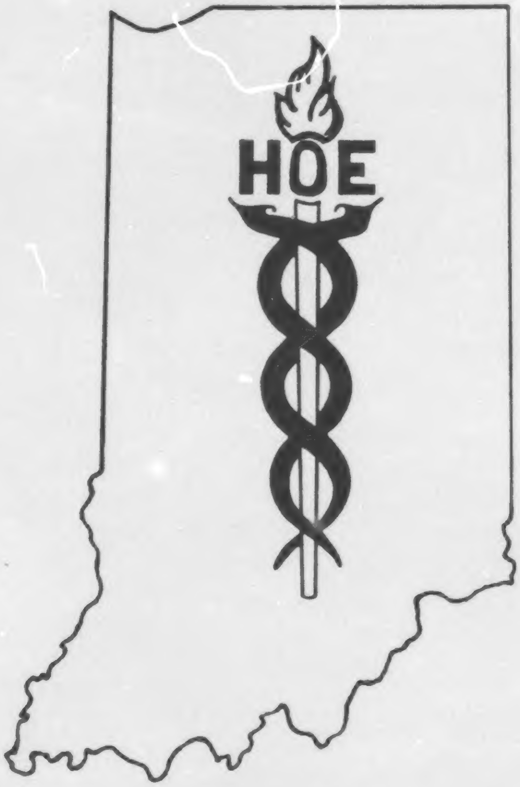
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 19

MEDICATION FOR INFLAMMATION, INFECTION AND IMMUNITY

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

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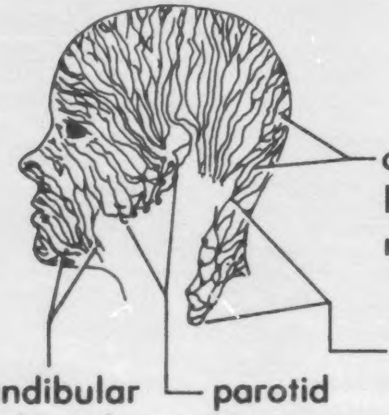
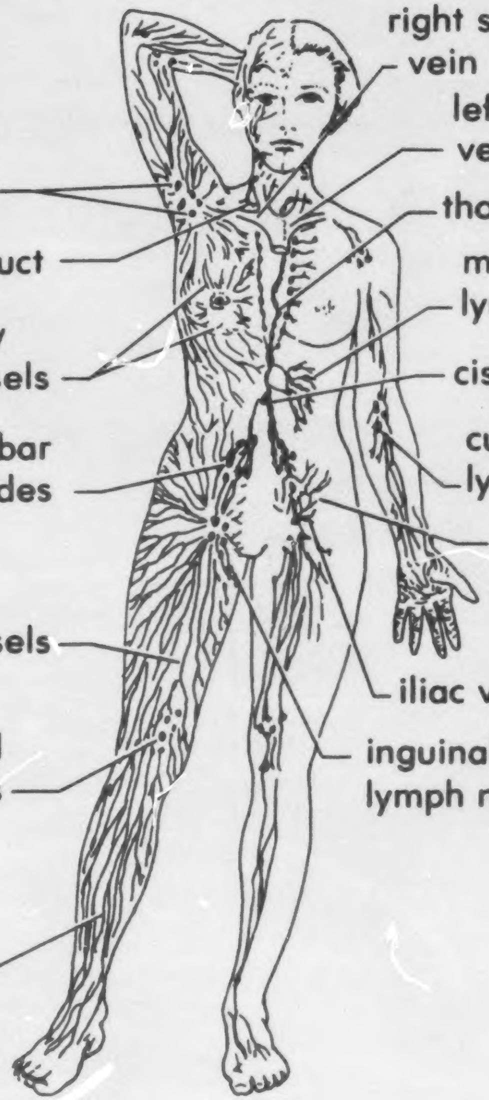
The Lymphatic System

LYMPH NODES AND VESSELS OF THE HEAD AND BODY


occipital lymph nodes
cervical lymph nodes
mandibular lymph nodes
parotid lymph glands


right subclavian vein
left subclavian vein
axillary lymph nodes
thoracic duct
right lymphatic duct
mesenteric lymph nodes
mammary lymph vessels
cisterna chyli
lumbar lymph nodes
cubital lymph nodes
iliac lymph nodes
femoral vessels
iliac vessels
popliteal lymph nodes
inguinal lymph nodes
tibial lymph vessels

FUNCTIONS OF THE LYMPHATIC SYSTEM

1. PRODUCES ANTIBODIES
2. MANUFACTURES (LYMPHOCYTES) WHITE BLOOD CELLS
3. FILTERS IMPURITIES SUCH AS DEAD CELLS

MEDICATION FOR INFLAMMATION, INFECTION AND IMMUNITY

GOAL

When any part of the human body is injured or affected by irritating susbstances or overuse, the body part reacts with a protective process called inflammation. Inflammation is characterized by redness, swelling, heat, pain and sometimes loss of function. If germs are present at the time of the injury or irritation, the human body has two processes that attempt to protect cells from being destroyed by the germs. One process is called infection; the other, immunity. With immunity there are special substances within the blood called antibodies that stop certain types of germs from destroying body cells; if there are no antibodies to fight the type of germs that enter the body, a second process called infection attempts to stop the germs. The process of infection is brought about by special white blood cells that attempt to destroy the germs.

At times the body cannot take care of the irritation or germ on its own and must have medication to assist the processes of inflammation, infection or immunity. Personnel administering medications for these body processes should understand how they work; what common medications are given to assist inflammation, infection and immunity; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for inflammation, infection and immunity.

TURN TO NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR INFLAMMATION, INFECTION AND IMMUNITY

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to the Process of Inflammation, Infection and Immunity
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

MEDICATIONS FOR INFLAMMATION, INFECTION AND IMMUNITY

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recall the definition of inflammation, infection and immunity

2. Recognize six common conditions/disorders (2 for each) that relate to inflammation, infection and immunity

3. Identify the four classifications of medications that assist the process of infection, with two examples of each, plus two examples of anti-inflammatory medications

4. Identify two types of acquired immunity and one example of a preparation for each type

5. Select five medications (three for infection, one anti-inflammatory and one for immunity) and list their:

    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics For The Nurse, you are to read pages 137 - 145, stopping at "Suggested Activities" on page 145 , pages 167 - 169 and read the information given in A and B of the lecture of this module. You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for inflammation, infection and immunity (try to find medications from the different classifications listed in your text or the lecture, if possible.) From your study try to find out (1) the reason for the medication, (2) the effectiveness of the medications (favorable and unfavorable). Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications for Inflammation, Infection and Immunity". Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text or the lecture, select five (at least one from each classification). Memorize the classification, trade name, chief action, method(s) of administration, frequency and side and/or toxic effects for each of the five medications.

CHECK LIST:

Complete the check list.

Module #A-9-19

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work, who are receiving some type of medication(s) for inflammation, infection or immunity (try to find medications from the different classifications listed in your text or the lecture, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name; use initials only.

MEDICATIONS FOR INFLAMMATION, INFECTION AND IMMUNITY

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of inflammation, infection or immunity medications? ______________________________

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________________
____
____
____

CHART STUDY

ACTIVITIES

QUESTIONS Cont.

3. Was there any method(s) of administration more common than other(s)? _____ If so, which one(s)? ______________________________

   ____

   Why do you think this is so? ________________________________

   ____

   ____

4. Were there any particular side-effects that seemed common to a given classification of the inflammation, infection or immunity medications? _______ If so, what were they? ______________________________

   ____

   ____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Review of the Processes of Inflammation, Infection and Immunity
   1. Inflammation
      a. definition
         a protective function of the body in a given area brought about by irritation, injury or infection (germs)
      b. process
         when a given body area is irritated, injured or infected, there is an increased circulation to the part to protect the affected tissue - increased circulation to a part produces redness, swelling and heat - the swelling places pressure on nerve endings causing pain - the swelling and pain may be enough to cause loss of function to the part
      c. all inflammatory conditions end in the suffix "itis" - such as, inflamed tonsils - tonsilitis
   2. Infection
      a. definition
         a protective function of the body when germs enter through a break in the skin or a body opening and attempt to destroy body cells
      b. process
         germs enter body through break in skin or body opening - there is nothing to stop them so they begin to attack and destroy body cells - the body is alerted to the invasion - special white blood

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ACTIVITIES

A. 2. b. Cont.

cells are sent to fight the germs - a fight occurs - some germs are killed, some white blood cells are killed - the body attempts to "wall off" the battle area to prevent spread - fight continues until germs all killed or germs take over - product of fight - dead germs, white blood cells - called "pus" - collect in walled off area called "abscess" after fight - abscess if small will be absorbed; if larger, rises to surface and ruptures - if large and/or deep, may need to be surgically opened, (incised and drained)

3. Immunity
    a. definition

    resistance to harmful effects from some germs

    b. process

    when germs enter body - some attack cells; some do not - those that do not, are stopped by special microscopic particles in blood stream called "antibodies" which prevent germs from attacking - (each germ would need different antibodies) Antibodies may be present in the person's blood stream from birth - other antibodies may be produced from a person having an infection and fighting off the germ - example of this might be person, after having measles, mumps, chicken pox, doesn't get them again because body built up antibodies - some infections, antibodies are never produced, such as, common cold - if person has immunity from birth - called "natural" immunity; if immunity develops later, called "acquired" immunity

ACTIVITIES

A. Cont.
  4. Processes may need help
    a. inflammation may be so severe, body cannot function due to swelling, pain, etc. - medication may be needed to reduce inflammation
    b. infection may be caused by strong germ or white blood cells not in good shape to fight - medication may be needed to slow down or destroy germs
    c. some infections are so deadly that if disease develops in body, death or disability will probably occur - (examples - tetanus or polio) therefore preparation that gives temporary or permanent immunity is given to person - preparations may contain antibodies (passive acquired) or make person's body develop antibodies (active acquired)

B. Common Inflammatory, Infectious or Non-Immune Conditions For Which Medications or Preparations May Be Helpful
  1. Inflammatory Conditions
     (many previously mentioned in other modules) Arthritis (A-9-11); Neuritis (A-9-12); Bronchitis and Rhinitis (A-9-13); Colitis (A-9-15); Cystitis (A-9-16); Vaginitis (A-9-17); and Dermatitis (A-9-18)
  2. Infectious Conditions
     (inflammation present, but cause always due to a germ - many types of germs - use Module A-2-1, Microorganisms That Cause Disease - if available - a few common ones for which there is no permanent immunity)

ACTIVITIES

B. 2. Cont.

- a. Strep-Throat
  caused by bacteria - severely inflamed and infected - reddened throat; person has fever, hurts to swallow - frequently needs medication to get better
- b. Athlete's Foot
  caused by fungus (details in A-9-18)
- c. Influenza (Flu)
  caused by virus - patient very sick - running temperature, ache all over - may have rhinitis, sore throat, chest congestion, usually bedfast for several days to a week - medications usually only help relieve symptoms - if not sensitive to immunization - may help prevent occurence
- d. Common Cold
  caused by virus - runny nose, sneezing, watery eyes, low grade temperature sometimes - last approximately 10 days - cannot cure with medications - only relieve symptoms
- e. Boils
  caused by bacteria which invade hair sacs on skin - may be due to unclean conditions - some people prone to them - such as diabetics - affected area becomes extremely painful, reddened and swollen - abscess will eventually rise and rupture - cleanliness important to prevent spread - medications and diet may help

LECTURE OUTLINE

ACTIVITIES

B. 2. Cont.

f. Pneumonia

caused by bacteria or virus - infection of lung tissue - can come from infected areas higher in system or can go directly to lungs - patient has difficulty breathing, painful, may or may not cough - virus form - may not have temperature - bacteria form - high temperature - virus form may be undetected for period of time - may or may not be helped by medication; bacteria form usually can be helped by medication if treated in time

3. Infectious Conditions For Which Immunity Should Be Acquired (By Preparations)

a. Infectious Hepatitis

serious infection of the liver caused by virus - carried by waste products or poor personal hygiene - person seriously ill - loss of appetite, nausea, fever, jaundice, loss of weight and strength - passive acquired immunity given to those exposed - protects for short time (3-4 weeks)

b. Tetanus (Lockjaw)

often fatal disease caused by a bacteria - characterized by stiffness of jaw, difficulty in swallowing, stiffness of neck, restlessness, irritability, headache, fever, chills, muscle spasms, convulsions and usually death - immunity must be given prior to infection or may not be helpful - active acquired immunity - with periodic "boosters"

ACTIVITIES

B. 3. Cont.

- c. Rubella (German Measles)
  highly contagious disease caused by a virus - causes fever and rash for 4-5 days. Patient is infectious 7 days before to 4 days after rash begins. Spread by respiratory secretions. If pregnant woman has rubella in first 3 months of pregnancy baby may be severely damaged - active aquired immunity preparation used to prevent disease.

C. Classifications of Medications Used for Inflammation, Infection and Immunity

1. Anti-infective Medications
   - a. Antiseptics - prevent growth of germs
   - b. Disinfectants - destroy germs
   - c. Sulfa drugs - synthetically made drugs that kill or prevent growth of specific germs
   - d. Antibiotics - drugs made from living cells that kill or prevent growth of specific germs
2. Anti-inflammatory Medications - decrease the signs and symptoms of inflammation
3. Medications Producing Immunities - make the body resistant to disease
   - a. Vaccines and Toxoids - stimulate body to produce immunity
   - b. Antitoxins and immune serums - provide body with immunity

ACTIVITIES

D. Selected Medications by Classification
- 1. Antiseptics - substances which prevent the growth of microorganisms (germs)
  - a. Used to prevent infection
  - b. Often used on skin or mucous membranes
  - c. Examples
    - (1) boric acid solution 5%
      - (a) May be liquid, powder or ointment
      - (b) Side effects - nausea, diarrhea, headache
    - (2) ethyl alcohol (Alcohol, Ethanol)
      - (a) Used on skin
      - (b) Side effects - dryness
- 2. Disinfectants - substances which destroy microorganisms
  - a. Some may be used on skin
  - b. Some strong disinfectants only used on objects
  - c. Effectiveness depends on strength, and time substance is in contact with the organisms
  - d. Examples
    - (1) Alcohol - Formaldehyde combination used on thermometers, instruments
    - (2) povidone - Iodine (Betadine, Proviodine)
      - (a) Used on skin and mucous membranes
      - (b) Often used on decubitus ulcers
    - (3) benzalkonium chloride (Zephiran, Germicin)
      - (a) Used on skin
      - (b) Used on objects (in stronger solutions)
  - e. Toxic reactions and side effects rare

ACTIVITIES

D. Cont.
  3. Sulfaonamides (Sulfa drugs)
    a. Synthetically made medications that act on specific germs
    b. Especially useful in urinary tract and digestive tract infections
    c. Examples
      (1) co-trimoxazole (Bactrim, Septra)
        (a) Used for urinary infections
        (b) Side effects - headache, nausea, abdominal pain
      (2) sulfisoxazole (Gantrisin, Urizole)
        (a) Used for urinary tract and systemic infections
        (b) Side effects - headache, nausea, abdominal pain
    d. Should always be given with plenty of fluids
  4. Antibiotics - drugs made from chemical substances produced by living cells
    a. Kill or prevent growth of specific germs
    b. Must be given at exact time ordered to maintain adequate amount in the blood at all times
    c. Examples
      (1) penicillin - oral and parenteral
        (a) Oral brands - V-Cillin, Penicillin V
        (b) Parenteral - Crysticillin, Wycillin
        (c) Oral penicillin should be given 1 hour before or 2 hours after meals

ACTIVITIES

D. 4. c. Cont.

- (2) ampicillin (Omnipen, Amcill)
  - (a) Oral, parenteral
  - (b) For urinary infections, systemic infections
- (3) cephalexin (Keflex)
  - (a) Oral
  - (b) For urinary, respiratory, bone and joint infections
- (4) tetracyclines (Declomycin, Terramycin, Robitet)
  - (a) Should not be given with antacids or milk
  - (b) For general infections
  - (c) Oral, I.M.
- (5) erythromycin (E-Mycin, E.E.S., Erythrocin)
  - (a) Oral
  - (b) Give 1 hour before or 2 hours after meals
  - (c) For respiratory, skin, soft tissue infections

d. Side effects include nausea, vomiting, hives, rash

5. Anti-inflammatory Medications
   - a. Used to decrease symptoms of inflammation
   - b. May be oral, parenteral or topical (See module 18)
   - c. Examples
     - (1) dexamethasone (Decadron) oral, topical, I.M. corticosteroid
     - (2) prednisolone (Deltasone, Meticorten) oral, corticosteroid
   - d. Serious side effects from prolonged use - fluid retention, irritability, hypertension
6. Vaccines and Toxoids
   - a. Stimulate the body to produce its own immunity (antibodies)

ACTIVITIES

D. 6. Cont.

- b. Examples
  - (1) tetanus toxoid - given parenterally
    - (a) Causes body to build up immunity
    - (b) Booster shot required periodically
    - (c) Side effects - allergic reaction
  - (2) measles vaccine (Rubella) - parenteral
    - (a) Causes body to build up immunity
    - (b) Side effects - rash, fever

7. Immune serum

- a. Gives immediate protection against a disease
- b. Immunity lasts only 2-4 weeks
- c. Side effects - fever, hives, headache
- d. Examples
  - (1) immune serum globulin - parenteral protection against hepatitis
  - (2) rabies immune globulin - parenteral protection against rabies

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

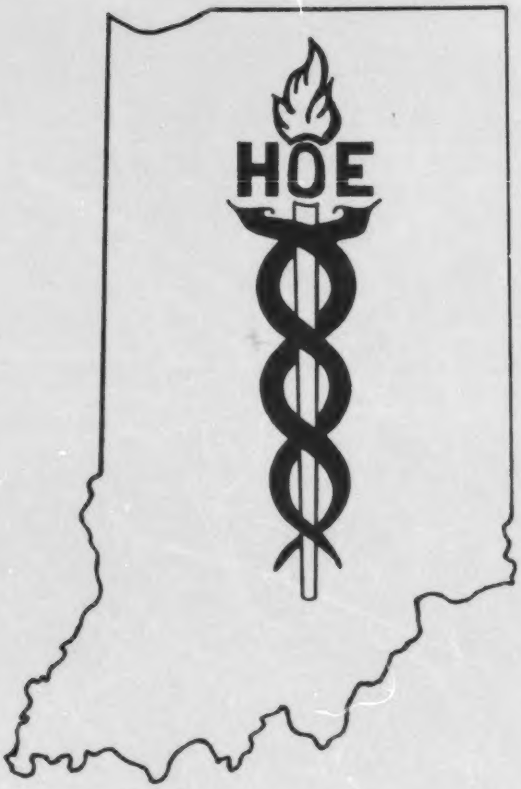
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 20

MEDICATIONS FOR NUTRITIONAL DEFICIENCIES

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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MEDICATIONS FOR NUTRITIONAL DEFICIENCIES

GOAL

For the human body to grow, develop and maintain a proper state of health, it must be maintained by specific substances, such as, proteins, carbohydrates, fats, water, cellulose, vitamins and minerals. All of these substances are available in the foods we eat. The taking in of proper foods for good health is called nutrition If any substance, needed to maintain health, is missing from the diet for a period of time, illness can occur. If one or two particular substances are missing, we say there is a "nutritional deficiency." if a number of substances are missing, the person is probably in serious physical condition and said to have "malnutrition." there are very few people who suffer from malnutrition in this country. If the foods needed to replace the missing nutrients cannot or will not be taken by the person, it may be necessary for the nutrient to be taken into the body in medication form.

Personnel administering medications for nutritional deficiencies should understand how nutrients work in the body; what common medications are ordered for nutritional deficiencies; and the actions, dosages and effects (favorable and unfavorable) of the common medications ordered.

This module will provide the health care worker with the basic infomation needed for entry level competence in the administration of medications for nutritional deficiencies.

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USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO NEXT PAGE

MEDICATIONS FOR NUTRITIONAL DEFICIENCIES

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Source and Function of Body Nutrients
2. Modules # A-9-1 through # A-9-10
3. All pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

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MEDICATIONS FOR NUTRITIONAL DEFICIENCIES

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, with at least 75% accuracy and in not more than 30 minutes, you will:

1. Recall the three major functions of nutrients
2. Recognize eight common conditions/disorders due to nutritional deficiency with one medication for each disorder
3. Identify the two major classifications of medications used for nutritional deficiencies and three medications for each classifaction
4. Select five medications (three vitamins and two mineral preparations) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO THE NEXT PAGE

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STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics For The Nurse, you are to read pages 159 - 164, stopping at "Suggested Activities" on page 164 . You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for nutritional deficiencies. (Try to find medications from the different classifications listed in your text, if possible.) From your study try to find out (1) the reason for the medication, and (2) the effectiveness of the medications, favorable and unfavorable. Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For Nutritional Deficiencies." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text on pages 160 - 163 and the lecture notes, select five (at least one from each classification). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the five medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work who are receiving some type of medication(s) for nutritional deficiencies. (Try to find medications from the different classifications listed in your text, if possible.) Record your findings below. In the area that asks for "the patient," do not list the patient's full name: use initials only.

NUTRITIONAL MEDICATIONS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of nutritional medications? ______

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ____________________
____
____
____

Module #A-9-20

CHART STUDY

ACTIVITIES

QUESTIONS (Cont.)

3. Was there any method of administration more common than other(s)? _____ If so, which one(s)? ______________________________
____

Why do you think this is so? ______________________________
____
____

4. Were there any particular side-effects that seemed common to a given classification of the nutritional medications? ______________
If so, what were they? ______________________________
____
____

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LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Review of the Source and Function of Body Nutrients
  1. Source of Nutrients
    a. definition
      Nutrients are those chemical substances found in the foods we eat which nourish the body. A nutrient must accomplish at least one of three functions. (see A. 2. below)
    b. types and best sources of nutrients
      (1) carbohydrates - sugars and starches
      (2) fats - butter, oils, meat fats, cheeses, etc.
      (3) proteins - meats, milk, eggs
      (4) vitamins - vegetables, meats, fruits, milk, eggs
      (5) minerals - milk, cheese, eggs, meats, vegetables
      (6) water - all foods we eat and drink

  2. Functions of Nutrients - 3 major ones
    a. supply heat and energy to the body (done by carbohydrates, fats and proteins)
    b. build and repair body tissues (done by proteins)
    c. regulate body processes (done by vitamins, minerals and water)
    d. if nutrients are lacking in diet, diet must be changed or nutrients given in form of medications, or person will become ill

LECTURE OUTLINE

ACTIVITIES

B. Common Nutritional Disorders Treated by Medication
   1. Pernicious Anemia - Vitamin B_{12} Deficiency
      a. Low iron level in the blood due to inability of stomach lining to absorb Vitamin B_{12} (required for formation of red blood cells).
      b. Found predominantly in adults.
      c. Symptoms are low red blood cell count, fatigue, inflammation of the mouth.
      d. Requires life long injections of Vitamin B_{12}.
   2. Iron Deficiency Anemia
      a. Low iron level in the blood due to inadequate diet or blood loss.
      b. Iron is required for hemoglobin formation, hemoglobin carries oxygen in the blood.
      c. Symptoms are low hemoglobin level, pallor, fatigue.
      d. Treated with oral iron and vitamin supplements.
   3. Rickets and Osteoporosis - Vitamin D, Calcium, Phosphorus Deficiency
      a. Vitamin D regulates the body's use of calcium and phosphorus.
      b. Deficiency hampers growth and affects the hardness of bones.
      c. Symptoms are bowed legs, deformed bones in children; porous, easily broken bones in adults.
      d. Treated with adequate amounts of Vitamin D, calcium and phosphorus.
      e. Overdoses of Vitamin D can be dangerous - causes hardening of soft tissues and abnormality of bones.
      f. Deficiencies can usually be treated by adequate diet (milk, fish oils, meat) and sunshine.

ACTIVITIES

4. Scurvy - Vitamin C. Deficiency
    a. Caused by inadequate vitamin C in the diet (citrus fruits, tomatoes, cabbage).
    b. Symptoms are bleeding gums, loose teeth, tiny hemorrhages, weight loss.
    c. Treated by adequate diet and Vitamin C (ascorbic acid) supplements.
5. Beriberi - Vitamin B_1 (Thiamine) Deficiency
    a. Caused by inadequate diet (whole grain products, beans, peas, liver).
    b. Symptoms of deficiency are fatique, irritability, poor appetite, depression.
    c. Treated by adequate diet and vitamin supplements.
    d. Many vitamin products contain Vitamin B_1 (Thiamine).
6. Pellagra - Vitamin B_3 (Niacin) Deficiency
    a. Caused by inadequate diet (Whole grain products, meat, milk, peanut butter).
    b. Symptoms of deficiency are red, inflamed mouth, skin lesions, weight loss, mental disturbances, weakness.
    c. Treated by adequate diet and vitamin supplements.
    d. Many vitamin products contain Vitamin B_3 (Niacin).
7. Hypokalemia - Potassium Deficiency
    a. Seldom caused by inadequate diet.
    b. Frequently a side-effect of diuretics - they cause potassium to be lost in the urine.
    c. May be treated by diet (bananas, milk, cereals, meat).
    d. Often treated by potassium replacement medications.
8. Dehydration _ Water Deficiency
    a. May be caused by inadequate fluid intake or diseases such as diabetes.
    b. May be caused by diuretics.
    c. Treated and prevented by encouraging adequate fluid intake.

ACTIVITIES

B. 8. Cont.
    d. May be treated by intravenous fluids, if necessary.
    e. Water is essential for all body functions.

C. Classifications of Medications Used for Nutritional Deficiencies
    1. Vitamins - given orally or parenterally to ensure adequate supply for body functions.
    2. Minerals - given orally or parenterally to ensure adequate supply for body functions.

D. Selected Medications by Classification
    1. Vitamins
        a. cyanocobalamin - Vitamin B_{12} (Betalin - 12, Rubramin).
            (1) given orally for Vitamin B_{12} deficiency due to diet, given parenterally for pernicious anemia.
            (2) side-effects are itching, hives, diarrhea.
        b. niacin - Vitamin B_3 (Nico-Span, Nicobid)
            (1) given orally or parenterally for vitamin B_3 deficiency or Pellagra
            (2) orally - 2 to 3 times daily.
            (3) side-effects are headache, facial flushing, itching, jaundice.
            (4) also known as nicotinic acid or niacinamide.
        c. multivitamin products - contain a combination of vitamins and minerals
            (1) often used to supplement diet.
            (2) side-effects are itching, diarrhea, nausea.
            (3) Examples:
                (a) Becotin-T - contains several B vitamins and Vitamin C
                (b) Folbesyn - contains B and C vitamins.
                (c) Gevribon - contains several vitamins and minerals.

ACTIVITIES

D. 1. c. Cont.
- (d) Multicebrin - contains vitamins, B, C, E, A, and D.

d. Given orally once or twice a day.

1. Minerals
    - a. Iron Products
        - (1) Used to treat iron deficiency anemia.
        - (2) Given orally or parenterally one to three times a day
        - (3) Side-effects are gastric distress, black stools, insomnia.
        - (4) Examples:
            - (a) iron dextran injection (Imferon).
            - (b) ferrous sulfate (Feosol).
            - (c) Iberet - sustained release tablet containing iron and vitamins.
    - b. Potassium Products
        - (1) Used to treat potassium deficiency (hypokalemia).
        - (2) Given orally two or three times a day; can also be given parenterally.
        - (3) orally should be given with a full glass of water.
        - (4) Side-effects are listlessness, mental confusion, and cardiac arrhythmias.
        - (5) Examples:
            - (a) potassium bicarbonate (K-Lyte).
            - (b) potassium chloride (K-Lor, Kaon, Slow K, Kayciel).

IMPORTANT NUTRIENTS	FUNCTIONS	SOURCES
Protein	Builds and repairs tissues helps build blood and form antibodies	Meat, fish, poultry, eggs, milk, beans, peanuts, cereals
Fat	Supplies energy, carries vitamins A, D, E and K	Butter, oils, fat in meats
Carbohydrate (sugars, starches)	Supplies energy	Fruits, vegetables, sugar, bread, cereal
MINERALS		
Calcium	Helps build bones and teeth, and helps regulate use of other minerals	Milk, cheese, ice cream, canned fish
Iron	Required for formation of red blood cells	Liver, meat, eggs, beans, prunes, raisins, bread
Iodine	Contained in thyroid hormone that controls metabolism	Seafoods, iodized salt
Potassium	Required for proper heart function and water balance	Bananas, grapes, milk, meat
VITAMINS		
Vitamin A	Required for healthy skin and helps prevent night blindness	Liver, eggs, dark green vegetables, fruits
Vitamin B_1	Helps keep nervous systems healthy and promotes good digestion	Meat, especially pork, cereals, bread
Vitamin B_2 (Riboflavin)	Promotes health of skin, eyes, tongue, and lips and helps cells use oxygen	Cereals, bread, milk, peanut butter, meat fish, poultry
Vitamin B_3 (Niacin)	Promotes health of nervous system, skin, digestive tract and helps cells use other nutrients	Cereals, bread, milk, peanut butter, meat, fish, poultry
Vitamin C (Ascorbic Acid)	Improves body's resistance to disease and stress, and improves healing	Citrus fruits, tomatoes, cabbage, white potatoes
Vitamin D	Helps the body use calcium and phosphorus for strong bones and teeth	Vitamin D milk, fish oils, sunshine

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

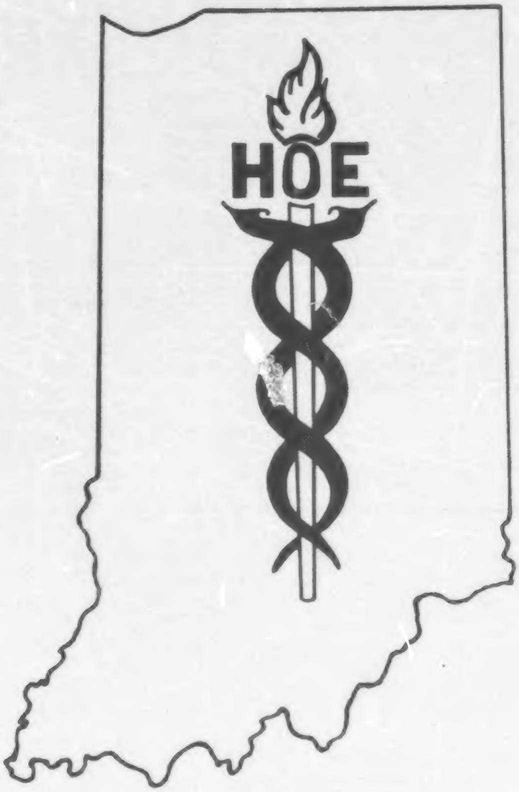
Instructor's Signature ____________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 21

MEDICATIONS FOR ALLERGIC REACTIONS, MOTION SICKNESS AND MALIGNANT DISEASES

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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MEDICATIONS FOR ALLERGIC REACTIONS, MOTION SICKNESS AND MALIGNANT DISEASES

GOAL

Many of the conditions/disorders that people have follow a set pattern or way in which they affect all persons. There are some disorders, however, that affect people in different ways. This is due to the individual "body chemistry" found in each and every person. the main disorders that are so individualistic are allergic reactions, motion sickness and malignant diseases (cancers). Medications may be extremely helpful in the treatment of allergic reactions and motion sickness: their use with malignant diseases, at present, is that of temporary relief.

Personnel administering medications for allergic reactions, motion sickness and/or malignant diseases should understand how these conditions react in the body; what common medications are ordered for these conditions; and the action and effects, favorable and unfavorable, of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for allergic reactions, motion sickness and malignant diseases.

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

MEDICATION FOR ALLERGIC REACTIONS, MOTION SICKNESS AND MALIGNANT DISEASES

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Modules # A-9-1 through # A-9-10
3. Pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO THE NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

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MEDICATIONS FOR ALLERGIC REACTIONS, MOTION SICKNESS AND MALIGNANT DISEASES

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, in not more than 30 minutes and with at least 75% accuracy, regarding allergic reactions, motion sickness and malignant disorders, you will:

1. Recall the one similarity common to all three
2. Recognize at least three symptoms common to each one
3. Identify the two medications given for each one
4. Select five medications (one for each one and two for any of the three) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

FOR STUDENT ACTIVITIES GO TO THE NEXT PAGE

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics For The Nurse, you are to read pages 149 - 152, stopping at "Suggested Activities" on page 152 and pages 154 - 157, stopping at "Suggested Activities" on page 157. You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for allergic reactions, motion sickness and malignant diseases. (Try to find medications from the different classifications listed in your text, if possible.) From your study try to find out (1) the reason for the medication, and (2) the effectiveness of the medications, favorable and unfavorable. Record your findings and answer questions found on the form in this module.

LECTURE:

At the time designated by the teacher, you will attend the lecture on "Medications For Allergic Reactions, Motion Sickness and Malignant Diseases." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text on pages 150 - 152, pages 155 - 156 and your lecture, select five (at least one from each of the three groups of conditions). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the five medications.

CHECK LIST:

Complete the check list.

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CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work who are receiving some type of medication(s) for allergic reactions, motion sickness and malignant diseases (try to find medications from the different classifications listed in your text, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name: use initials only.

MEDICATIONS FOR ALLERGIC REACTIONS, MOTION SICKNESS AND MALIGNANT DISEASES

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of requested medications? ________

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________________
____
____
____

CHART STUDY

ACTIVITIES

QUESTIONS (Cont.)

3. Was there any method of administration more common than other(s)? ____ If so, which one(s)? ______________________________
____

Why do you think this is so? ______________________________
____
____

4. Were there any particular side-effects that seemed common to a given classification of the requested medications? ______________
If so, what were they? ______________________________
____
____

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Module #A-9-21

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Development of Allergic Reactions, Motion Sickness and Malignant Diseases

1. Allergic reactions, motion sickness and malignant diseases are all very individualistic;
    a. may depend on body chemistry, body sensitivity and defenses, family background, etc.
    b. may produce individual body responses to disease which may be quite different
2. Allergic Reactions
    a. person may be sensitive to any substance contacted by touch, breathing-in, eating, injection into body
    b. substance causing reaction called allergen
    c. allergen causes body cells to release substance called histamine
    d. histamine causes various reactions - swelling, hives, rhinitis, difficult breathing, nausea, vomiting, diarrhea.
    e. extreme reaction may cause shock and death
    f. common allergens are:
        (1) foods - eggs, strawberries, shellfish
        (2) contact - wool, poison ivy
        (3) breathing - rag weed, dust
        (4) medications - morphine, sulfa drugs
    g. can be treated with antihistamines
3. Motion Sickness
    a. symptoms of nausea and vomiting felt by some people on a moving boat, train, airplane, car, etc.
    b. caused by irregular motion, especially up and down motion

ACTIVITIES

A. 3. Cont.
    c. interferes with balance; sometimes person becomes quite ill
    d. can be treated with antiemetics and antihistamines

4. Malignant Diseases
    a. ordinarily cells and tissues live and reproduce in an orderly way
    b. sometimes tissues grow in an abnormal way within themselves but don't invade other kinds of tissues - benign tumor
    c. sometimes cells grow in a wild, disorganized way, invading and destroying other tissues - malignant tumor or cancer
    d. malignant diseases (cancer) sometimes metastasize - they spread to a distant location by way of the bloodstream or lymph system
    e. actual cause of cancer is unknown
    f. some things increase the risk of cancer:
        (1) smoking
        (2) exposure to carcinogenic (cancer-causing) substances such as asbestos and hydrocarbons found in tobacco smoke
        (3) prolonged exposure to ultraviolet light and sunlight
    g. Seven Warning Signals - early symptoms of cancer:
        (1) change in size or color of a mole
        (2) a sore that doesn't heal
        (3) bleeding or discharge, as from the nipple or female sex organs
        (4) lump in the breast or "dimpling" of the skin of the breast
        (5) prolonged hoarseness
        (6) indigestion or trouble swallowing
        (7) change in bowel habits or blood in the stool

LECTURE OUTLINE

ACTIVITIES

A. 4. (Cont.)
   h. presence of a "warning signal" does not necessarily mean cancer, but a physician should check it out
   i. treatment for cancer may be:
      (1) surgical removal
      (2) radiation - x-ray, radium, cobalt, etc.
      (3) chemotherapy - treatment with medications

B. Classification of Medication Used for Allergic Reactions, Motion Sickness, and Malignant Diseases
   1. Antihistamines - drugs that oppose actions of histamines released by the body with allergic reactions; also sometimes effective for motion sickness
   2. Antiemetics - stop nausea and vomiting
   3. Antineoplastics - drugs which act in various ways to slow the growth of or kill cancer cells

C. Selected Medications by Classification
   1. Antihistamines - combat the effects of histamine which is released by the body and causes symptoms associated with allergic reactions; also given for motion sickness
      a. may be given orally, parenterally, or topically
      b. side effects - drowsiness (most common), dizziness, loss of appetite, dry mouth
      c. examples:
         (1) diphenhydramine (Benadryl, Phenamine) - given orally, I.V., I.M., t.i.d., or q.i.d
         (2) chlorpheniramine (Chlor-Trimeton, Teldrin)- given orally
         (3) promethazine (Phenergan, Methazine) - given orally, rectally, I.M. for motion sickness
         (4) trimeprazine (Temaril) - given orally, t.i.d. or q.i.d. for itching

ACTIVITIES

C. Cont.

2. Antiemetics - drugs used to treat and prevent nausea, vomiting and dizziness
    a. some antiemetics are also antihistamines
    b. given orally, parenterally, rectally
    c. side effects - drowsiness, dizziness, dry mouth
    d. examples:
        (1) dimenhydrinate (Dramamine, Travamine) - oral, rectal, I.M., I.V.
        (2) meclizine (Antivert, Bonamine, Bonine) - also an antihistamine, given orally
        (3) trimethobenzamine (Tigan) - given orally, rectally, I.M.
3. Antineoplastics - drugs which kill or slow the growth of cancer cells (neoplasms)
    a. may be given I.V. in hospital, then changed to oral for maintainance at home or in a nursing home
    b. most common side effects are nausea and vomiting; also loss of hair, decrease in white blood cell count
    c. examples:
        (1) cyclophosphamide (Cytoxan) - may cause bleeding from bladder - fluids should be encouraged
        (2) fluorouracil (5-FU) - may cause staggering gait
        (3) methotrexate - patient should avoid exposure to sunlight while receiving methotrexate
    d. patient receiving antineoplastics must be watched carefully for undesirable effects
4. Hormones - testosterone and estrogens may be used to relieve pain in advanced cancer

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

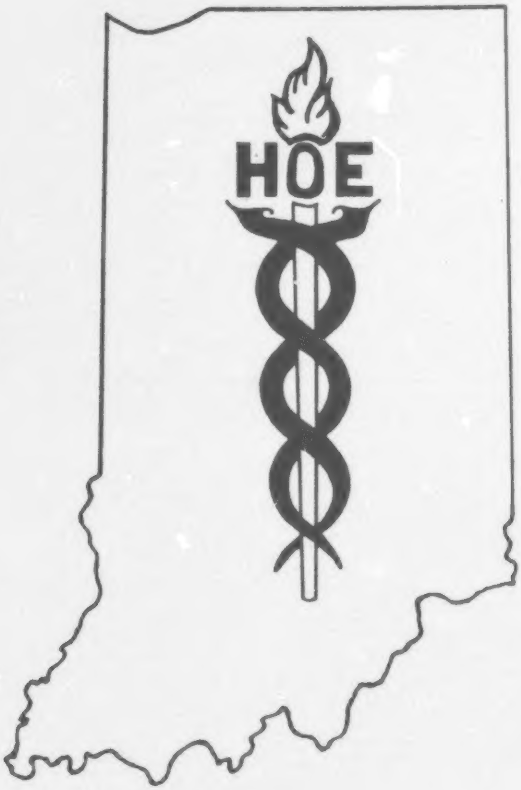
Instructor's Signature ______________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 88-78-III-35



MODULE

# A - 9 - 22

MEDICATIONS FOR MENTAL AND/OR EMOTIONAL STRESS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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MEDICATIONS FOR MENTAL AND/OR EMOTIONAL STRESS

GOAL

In order for persons to be totally healthy, they must be healthy in mind as well as body. There are times in every person's life when worries, problems and pressures place them in a state of mental or emotional stress. A certain amount of stress is stimulating and prevents life from being boring and monotonous. The mentally healthy person adjusts and stays in balance. There are times, however, when the pressures, stress factors and behavior pattern of persons are not as they should be. Reactions can be beyond the "normal" or "average" level of behavior and the individual is extremely tense and overwrought or very depressed.

If a person remains in touch with reality, even though over-wrought or depressed, we say he/she is mentally distressed; if contact with reality is lost, we say he/she is mentally ill. Medications for overwrought or depressed persons, mild to severe, have been found to be extremely helpful to many people.

Personnel administering medications for mental or emotional stress should understand how persons with stress problems frequently behave; what common medications are ordered for mental or emotional stress; and the actions, dosages and affects, favorable and unfavorable, of the common medications ordered.

This module will provide the health care worker with the basic information needed for entry level competence in the administration of medications for mental and/or emotional stress.

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USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

MEDICATIONS FOR MENTAL AND/OR EMOTIONAL STRESS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study;

1. Introduction to Reactions of Mental and/or Emotional Stress
2. Modules # A-9-1 through # A-9-10
3. Pre-requisites for Modules # A-9-1 through # A-9-10

* *

If you have completed these areas of study

GO ON TO THE NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

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MEDICATIONS FOR MENTAL AND/OR EMOTIONAL STRESS

Your objective for this module consists of the following:

OBJECTIVE

Given a written examination, in not more than 35 minutes and with at least 75% accuracy, you will:

1. Recognize three events which might cause stress.
2. Describe a method of successfully coping with stress.
3. Identify five defense mechanisms.
4. Recall two types of neuroses and two types of psychoses.
5. Identify three possible causes of organic brain syndromes.
6. Recognize five main classifications of medications for mental or emotional conditions and one common medications for each classification.
7. Select five medications (one for each classification) and list their:
    a. classification
    b. trade name
    c. chief action
    d. method(s) of administration
    e. side-effects and/or toxic effects

STUDENT ACTIVITIES

INSTRUCTIONS

TEXT:

From Skelley's Medications and Mathematics For The Nurse, you are to read pages 171 - 174, stopping at "Additional Side-Effects" on page 174 . You are to do your reading before attending the lecture. All students are expected to make notations on their reading.

CHART STUDY:

Before attending the lecture, study the charts of at least three different patients, in the area where you work, who are receiving some type of medications for mental stress. (Try to find medications from the different classifications listed in your text, if possible.) From your study try to find out (1) the reason for the medication, and (2) the effectiveness of the medications, favorable and unfavorable. Record your findings and answer questions found on the form in this module.

LECTURE

At the time designated by the teacher, you will attend the lecture on "Medications For Mental and/or Emotional Stress." Be certain to pay particular attention to the major classifications of medications and all related factors pertaining to the selected medications. An outline of the lecture can be found in this module. The taking of notes during the lecture is expected of all students.

GROUP DISCUSSION:

Following the lecture you are to participate in a group discussion based on the questions you answered following your chart study.

SELECTION:

From the medications listed in your text on pages 172 - 174, select five (one from each of classification). Memorize the classification, trade name, chief action, method(s) of administration, and side and/or toxic effects for each of the five medications.

CHECK LIST:

Complete the check list.

CHART STUDY

ACTIVITIES

Study the charts of at least three different patients in the area where you work who are receiving some type of medication(s) for mental stress. (Try to find medications from the different classifications listed in your text, if possible). Record your findings below. In the area that asks for "the patient," do not list the patient's full name: use initials only.

MEDICATIONS FOR MENTAL STRESS

PATIENT	CLASSIFICATION OF MEDICATION	TRADE NAME	LENGTH OF TIME ON MED.	EFFECTIVENESS OF MEDICATION
1.				
2.				
3.				
Extra				

ANSWER THE FOLLOWING QUESTIONS:

1. Did you find all classifications of medications for mental stress?
   ____

2. Were any classifications more common than others? _____ If so, why do you think this was the case? ______________________
   ____
   ____
   ____

CHART STUDY

ACTIVITIES

QUESTIONS (Cont.)

3. Was there any method of administration more common than others?
_____ If so, which one(s)? ____
____

Why do you think this is so? ______________________________________
____
____

4. Were there any particular side-effects that seemed common to a given classification of the medications for mental stress? __________
If so, what were they? ____
____
____

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following:

A. Review of Patterns of Mental and/or Emotional Stress

1. Definition of stress:

   any circumstances, physical or mental that causes strain or tension - certain amount of stress is stimulating and healthy - normally, average person able to cope with stress - soon returns to normal - however, continued stress pushes person beyond limit ending in physical and/or mental reaction

2. Causes of stress:

   a. normal events

      occurrences that may cause stress - periodic changes in one's life from time to time - may be due to happy occurrence or may be due to fears, feeling of inadequacy, not feeling loved, etc.

      (1) several normal events at one time can build to crisis point

      (2) examples of normal events could be: starting school, entering adolescence, dating, first job, outstanding personal achievement, graduation, changes in personal habits, vacations, minor law violations, changing jobs, adjusting to in-laws, pregnancy, new family member, Christmas, troubles with the boss, change in residence, death of a friend, etc.

B. Patterns of Emotional Development

1. Determinants of Human Behavior:

   a. Directed toward satisfaction of physical and emotional needs (review module 10, basic human needs).

ACTIVITIES

B. 1. Cont.
  - b. Influenced by:
    - (1) inherited tendencies - emotional makeup, physical makeup.
    - (2) physical environment - home conditions, climate, community conditions.
    - (3) social environment - family, friends, other people.
    - (4) early development - interrelationship of family, home conditions, physical well being.

2. Changing Conditions and Life Situations Require Continual Adjustments
  - a. We say a person is "well adjusted" when he is able to deal effectively with his problems.
  - b. A poorly adjusted person is restless, unhappy, and feels unable to control his life.
  - c. Threats to physical or mental well-being produce stress
    - (1) may be caused by illness, job change, death of friend or family member, school circumstances, divorce, etc.
    - (2) cause physical and emotional changes.

3. Reactions to Stress:
  - a. May be physical - elevated pulse rate and blood pressure, loss of appetite, increased susceptibility to illness.
  - b. May be emotional -
    - (1) some stress is stimulating and healthy.
    - (2) extreme stress produces anxiety, fear, hostility, frustration.
  - c. Response to stress depends on extent of stress and person's ability to cope effectively.

LECTURE OUTLINE

ACTIVITIES

B. Cont.

4. Coping Mechanisms - Ways of Handling Stress:
    - a. Constructive coping mechanisms
        - (1) openly facing and analyzing problems.
        - (2) working out ways to deal with the problem.
        - (3) maintaining responsibility for your own life.
    - b. Destructive coping mechanisms
        - (1) Defense mechanisms (partial list)
            - (a) rationalization - giving yourself and others a false reason for your behavior when you can't face the true reason
            - (b) projection - blaming your failures or traits on someone else.
            - (c) daydreaming - escaping from the present situation.
            - (d) regression - returning to an earlier state, such as becoming childlike again when you are sick.
            - (e) withdrawal - shutting off of communications with others.
        - (2) neurosis - an emotional reaction that interferes with leading a normal life.
            - (a) anxiety neurosis - frequent feelings of uneasiness or fear with no apparent cause.
            - (b) phobias - exaggerated fears caused by inner conflicts or disagreements with one's self, such as claustrophobia
            - (c) depression - lack of interest in life, insomnia, loss of appetite due to inability to cope with one's life.

ACTIVITIES

B. 4. Cont.

- (3) psychosis - a major mental disorder in which a person's personality is deranged and he loses contact with reality.
    - (a) schizophrenia - loss of ability to tell fact from imagination.
    - (b) paranoia - person develops false ideas that he is being plotted against or that he is a very important person.
    - (c) affective psychosis - person has wide swings in emotions (manic-depressive reaction).

5. organic brain syndromes
    - a. emotional disorders which are caused by some physical agent or condition.
    - b. causes might be arteriosclerosis, senility, brain tumors, alcohol and other drugs, infections, nutritional deficiencies, etc.
    - c. normal functioning of the brain is changed.
    - d. may be short term or long lasting; irritability, confusion, delirium, disorientation, changes in behavior
    - e. drugs are frequently used in treatment; drug used depends on cause.

6. Emotional reactions to illness and death
    - a. facing illness and death produces great stress, fear and anxiety for patient and family.
    - b. behavior changes may be expected; hostility, regression, etc.
    - c. persons under great stress may require temporary drug therapy to reduce symptoms.

ACTIVITIES

C. Classifications of Medications Used for Emotional Stress and Abnormal Behavior

1. Antidepressants - increase activity and elevate mood of the depressed person.
    a. tricyclics
    b. MAO inhibitors
2. Antianxiety drugs (minor tranquilizers) - reduce anxiety without causing sleep.
3. Antipsychotic drugs (major tranquilizers) - control symptoms of abnormal behavior but do not treat underlying disease.
4. Mood stabilizer - prevents mood swings of manic-depressive illness.
5. Vasodilators - increase blood supply to the brain.

D. Examples of Medications by Classification

1. Antidepressants
    a. used for depressed persons to elevate mood, increase activity, overcome insomnia.
    b. drug must be given for 1 to 4 weeks before effect is noticed.
    c. side effects - most dangerous is increased suicide risk; also confusion, disorientation, numbness, urinary retention.
    d. when taking MAO inhibitors patients should avoid foods containing high tyramine such as; cheese, fish, liver, baked potatoes, yogurt, beer and wine.
    e. when taking Tricyclic antidepressants patients should avoid exposure to sunlight.
    f. examples
        (1) amitriptyline (Elavil) - Tricyclic; given orally or I.M.

ACTIVITIES

D. 1. f. Cont.
        (2) doxepin (Adapin, Sinequan) - Tricyclic; given orally.
        (3) imipramine (Tofranil) - Tricyclic; given orally or I.M.
        (4) phenelzine (Nardil) - MAO inhibitor; given orally.
   2. Antianxiety drugs (minor tranquilizers)
      a. used for patients with anxiety, also used for prevention and treatment of convulsions.
      b. should not be used in combination with alcohol or other depressants.
      c. side effects are drowsiness, disturbed sleep, hypotension, double vision, depression.
      d. Examples
        (1) diazepam (Valium)
            given orally for anxiety
            given I.V. for convulsions
        (2) chlordiazepoxide (Librium)
            given orally or I.M.
        (3) chlorazepate (Tranxene)
            given orally
        (4) meprobamate (Equanil, Miltown)
            given orally
   3. Antipsychotics (Major Tranquilizers)
      a. help control symptoms of psychoses and organic brain syndrome; have mind - altering effects, interfere with thought processes. Change behavior but do not treat the underlying cause
      b. should not be combined with alcohol
      c. side effects include drowsiness, hypotension, loss of appetite, bronze color of skin, dry mouth

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ACTIVITIES

D. 3. Cont.

- d. also cause extrapyramidal symptoms such as mask-like face, tremors, bizarre movements of face, tongue, arms, and legs
- e. should not be taken with antacids
- f. persons taking antipsychotics should avoid exposure to the sun
- g. examples:
    - (1) chlorpromazine (Thorazine)
      given orally or I.M.
    - (2) haloperidol (Haldol)
      given orally or I.M.
    - (3) thioridazine (Mellaril)
      given orally
    - (4) thiothixene (Navane)
      given orally or I.M.

4. Mood Stabilizers
    - a. prevent mood swings of manic-depressive illness
    - b. must be given 1-3 weeks before effects are noted
    - c. side effects include tremors, thirst, drowsiness, dry mouth
    - d. example:
      lithium (Carbolith, Lithotabs) - given orally

5. Vasodilators
    - a. given to increase the blood supply to the brain for the patient with organic brain syndrome due to arteriosclerosis
    - b. side effects include facial flushing, perspiration
    - c. examples
        - (1) papaverine (Pavabid, Cerespan)
          given orally; also comes in sustained-release form
        - (2) isoxsuprine (Vasodilan)
          given orally
        - (3) combination drugs containing vasodilators:
          Hydergine (oral)
          Peritrate with Phenobarbital (oral)

CHECK LIST

ACTIVITIES

As you complete each activity, check it off and date.

ACTIVITY	CHECK	DATE
Text Reading		
Chart Study		
Lecture		
Group Discussion		
Selection		

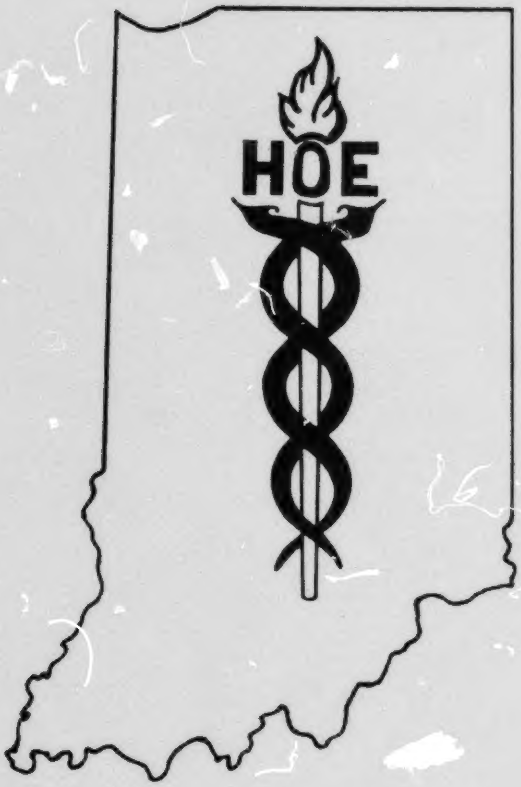
Instructor's Signature ______________________

When all activities are complete and you feel you are ready to take the Master Test, take this module to your teacher and schedule the Master Test.

If you do not feel ready for the Master Test, schedule a conference with your teacher.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

# A - 9 - 23

PREPARATION OF ORAL MEDICATIONS

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PREPARATION OF ORAL MEDICATIONS

GOAL

In today's health care setting, medication by mouth (orally) is one of the major methods of treatment. Each medication is usually prepared and administered, one dose at a time, by a member of the nursing category of health workers. Because of the large variety and vast number of oral medications given and the many different reactions that can occur, it is absolutely necessary that every precaution possible be taken in the preparation of oral medications. This module contains the information needed for specified health workers to:

1. select the proper oral medication.
2. handle the medication in the correct manner.
3. alter the state of the medication (if indicated).
4. collect the necessary equipment and supplies needed for administration of the medication

TURN TO NEXT PAGE.

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objectives so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

PREPARATION OF ORAL MEDICATIONS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study or performance:

1. Principles of Medical Asepsis
2. Hand Washing Technique
3. Legal Responsibilities for the Health Worker
4. Environmental Safety
5. Ethics for the Health Worker
6. Simple Hot and Cold Foods for the Patient

7-28. Lessons (Modules) #1 - #22 in Unit 9 on Medicinal Nursing Treatments

* *

If you have completed these areas of study

GO ON TO THE NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

PREPARE ORAL MEDICATION FOR A PATIENT

Your objective for this module consists of four (4) parts as following:

OBJECTIVE

1. Given one of four possible Unit - Dose medications to prepare, the proper equipment and an oral medication check list, you will:
   a. verify the medication order.
   b. prepare the medication as ordered.
   c. perform the task within five (5) minutes.
   d. maintain 100% accuracy on the check list.

2. Given one of four possible solid medications (from quantity container) to prepare, the proper equipment and an oral medication check list, you will:
   a. verify the medication order.
   b. prepare the medication as ordered.
   c. perform the task within seven (7) minutes.
   d. maintain 100% accuracy on the check list.

3. Given one of four possible liquid or powder medications (from quantity container) to prepare, the proper equipment and an oral medication check list, you will:
   a. verify the medication order.
   b. prepare the medication as ordered.
   c. perform the task within ten (10) minutes.
   d. maintain 100% accuracy on the check list.

4. Given one of two possible controlled drugs to prepare, the proper equipment and an oral medication check list, you will:
   a. verify the medication order.
   b. prepare the medication as orderd.
   c. record the medication in the count book or sheets correctly.
   d. verify the drug count.
   e. perform the task within thirteen (13) minutes.
   f. maintain 100% accuracy on the check list.

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services.
Vol. 3., pp. 69 - 74.
Read before going to the lecture. (If this text is not available, check teacher list for other references.) All students are expected to make notations on their reading.

LECTURE:

"Principles of Oral Medication"
Check the bulletin board for the time(s) of the lecture. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) You will find a lecture outline on pages nine through eleven (9 - 11) of this module.

DEMONSTRATION:

"How to Prepare Oral Medicaions for a Patient"
Check the bulletin board for the time(s) of the demonstration. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) You will find a demonstration outline on pages twelve through sixteen (12 - 16) of this module.

LABORATORY ASSIGNMENT:

"Medication Preparation"
To guide you in your ability to prepare oral medications, the necessary worksheets for the laboratory assignment provided. Do This assignment only after you have heard the lecture and seen the demonstration (unless you have your teacher's permission to do so.) Check the schedule for your assigned laboratory time and location.

STUDENT PARTNER:

It is suggested that when you practice in the laboratory, practice with a student partner observing the check list, then you observe your partner. Working together usually helps both students.

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture be sure to note:

1. Principles of Oral Medications
   - a. Verification of medication order
   - b. Standard oral medication forms (review)
   - c. Standard medication names and dosages (review)
   - d. Storage and security of medications (review)

2. Supplies Necessary for Preparation of Oral Medications
   - a. Patient's chart
   - b. Kardex
   - c. Medication cards (if applicable)
   - d. Medication storage area
   - e. Medication tray or cart
   - f. Keys for medication storage area
   - g. Medication cups - souffle and/or calibrated
   - h. Appropriate medication
   - i. Water pitcher and drinking cup
   - j. Controlled drug and narcotic sign-out book (if applicable)
   - k. Any additional equipment or supplies that may be needed to alter the state of a medication

3. Reasons for Altering State of Medication
   - a. Patient having difficulty swallowing
   - b. Disguise taste or presence of medication
   - c. Prevent medication from being harmful to tissue
   - d. Activate effectiveness of medication

4. Common Methods of Altering State of Medication
   - a. Crush medication
   - b. Empty medication from capsule
   - c. Mix medication with liquids or food substance

ACTIVITIES

5. Helpful Hints and Precautions in Preparing Oral Medications
    a. If you do not understand the medication order, or it is questionable, go to your superior immediately before preparing the medication.
    b. Make certain you know what to do in the event the medication you are preparing is not in the medication storage area.
    c. Know how to check for variable trade names of medication.
    d. Compute the dosage for a medication only if you are qualified to do so. Be sure to know the policy of your facility.
    e. When pouring medication from multiple-dose containers, if you pour out more medication than is needed,

        DO NOT RETURN TO CONTAINER.

        Dispose of excess medication by flushing down large-holed drain or flush facility.
    f. If label is smeared or difficult to read, DO NOT PREPARE medication. Contact superior or return to pharmacy depending on agency policy.
    g. When preparing controlled drugs or narcotics, if balance sheet and medication count are not the same, obtain assistance and proceed with proper validation method at once.
    h. If you have prepared a medication that the patient cannot swallow, be certain altering its state will not alter effectiveness before diluting, mixing or crushing it.
    i. When mixing a medication with a liquid or soft food, be certain you are not mixing it with something that will alter its effectiveness.

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DEMONSTRATION OUTLINE

ACTIVITIES

As you observe the demonstration be sure to note the following:

1. Supplies necessary for preparation of oral medication. (see lecture outline)

2. Steps In Preparing Oral Unit-Dose Medication
   a. Verify medication order.
   b. Proceed to prepare medication at appropriate time.
   c. Obtain keys for medication storage area.
   d. Unlock medication area.
   e. Wash your hands in adjacent facility.
   f. Obtain medication tray (or cart).
   g. Check storage area for specific medication container.
   h. Select appropriate medication container.
   i. Read label on container and verify medication with medication order.
   j. Check for correct dosage of medication order.
   k. Take unit-dose from container.
   l. Verifty label on unit-dose with medication order
   m. Place unit-dose on tray.
   n. Close container. Verify label third time with medication order.
   o. Return container to proper place.
   p. Lock or secure medication storage area.
   q. Clean up preparation area.
   r. Obtain pitcher of water and drinking cup.

DEMONSTRATION OUTLINE

ACTIVITIES

3. Steps in Preparing Solid Oral Medications form Multiple-Dose Container
   - a-j. Same as steps a-j for preparing Unit-Dose.
   - k. Obtain paper souffle cup for solid medication
   - l. Open container and place lid surface side down (rim up).
   - m. Pour desired number of tablets or capsules into lid of container.
   - n. Pour tablet(s) or capsule(s) from lid into souffle cup without touching rim of cup.
   - o. Verify the poured medication with the medication order.
   - p. Place medication cup on tray.
   - q-v. Same as steps n-r for preparing Unit-Dose.

4. Steps in Preparing Liquid or Powder Oral Medication from Multiple-Dose Container
   - a-j. Same as steps a-j for preparing Unit-Dose.
   - k. Obtain calibrated medicine cup.
   - l. Hold calibrated medicine cup to eye level, place thumb nail at desired amount and pour medication (label up) to lowest point of the meniscus.
   - m. Clean top and lid of container.
   - n-t. Same as steps o-r for preparing solid multiple-dose medication.

5. Steps in Preparing Controlled Drug or Narcotic
   - a-b. Same as steps a-b for Unit-Dose.
   - c. Obtain keys for medication storage area, controlled drug area and sign-out book for controlled drugs or narcotics.

ACTIVITIES

5. Cont.
   - d. Unlock medication storage area. Then unlock controlled drugs and narcotic storage area.
   - e-m. Same as steps e-m for Unit-Dose.*
   - n. Open sign-out book and turn to correct control sheet for medication you are preparing.
   - o. Record the medication on the proper sheet listing: drug dose, date, name of person to whom given, time given, and your signature.
   - p. Verify the amount of medication you have left in the container with balance now listed on control drug sheet.

* (If controlled drug is not a unit-dose, the method of pouring should coincide with steps previously given for Multiple-Dose Containers.)

6. Steps in Altering the State of a Medication
   - a. Prepare medication according to steps given for:
     - (1) Unit-Dose
     - (2) Multiple Dose - Solid
     - (3) Multiple Dose - Liquid or Powder
     - (4) Controlled Drug or Narcotic
   - b. To make medication easier for patient to swallow, determine if medication is to be crushed, dissolved, or mixed with food or beverage.
     - (1) For crushing, obtain a pestle or two spoons. Place tablet in pestle bowl or between two spoons, apply pressure and grind back and forth. Place all of crushed medication in souffle cup for mixing with liquid or soft food.

ACTIVITIES

6. b. Cont.

(2) For capsule, hold over souffle cup and gently twist apart, allowing all of medication to fall into cup. Tap on each end of capsule to make certain all medication is obtained Hold medication for further mixing.

c. For mixing medication with soft food or liquid, obtain only necessary amount of food or liquid from kitchen and place in container. Place food or beverage on tray with medication. Do not mix until just before administering.

d. Collect any straws or spoons that will be necessary for administration of medication.

MEDICATION PREPARATION

INSTRUCTIONS

1. During your scheduled laboratory time:
    - a. have your partner observe you.
    - b. select at least two of the patient situations on pages 418 and 421.
    - c. use the corresponding Kardex card for your situations.
    - d. go to the medication area and prepare medications for your "patients," as ordered, following the performance check list.
    - e. be sure and keep in mind those principles, hints, and precautions given in the lecture and demonstration.
2. Observe your partner preparing medication.

CHARTING SITUATIONS

ACTIVITIES

SITUATION # 1

On February 1, 1981, you are assigned to give medications on the 7-3 shift. One of your patients is Mrs. Betty Jones, age 68, in room 653. She has Diabetes and Angina Pectoris. After report you make rounds to see all of your patients. Mrs. Jones tells you she is having dull chest pain and asks for her pain medication. You return to the nurses' station and prepare Mrs. Jones' 8:00 a.m. medications and her PRN for pain. The codeine bottle you pour from contains 30 tablets.

KARDEX

DATE	MEDICATIONS	HOUR			
1/16/81	Nitrobid Span 2.5 mg. ṫ daily	8AM			
1/16/81	Diabenese 250 mg.. Tab ṫ daily	8AM			
1/16/81	Metamucil 2 rounded Teaspoons in				
	full glass of water - daily	8AM			
1/16/81	Codeine 30 mg. Tab ṫ q4h. p.r.n./pain				

DIAGNOSIS: Diabetes Angina Pectoris — DIET: 1200 cal Diabetic

Jones, Betty — #653 — AGE: 68 — DR. White

CHARTING SITUATIONS

ACTIVITIES

SITUATION # 2

On February 1, 1981, you are assigned to give medications on the 7-3 shift. When you make rounds you find that your patient, Mr. Steve Fredericks, is coughing so much he cannot eat his breakfast. Mr. Fredericks has pneumonia. You check his Kardex and prepare his 8 a.m. medications and his PRN for coughing.

KARDEX

DATE	MEDICATIONS	HOUR			
1/1/81	Multicebrin cap T qd	8			
1/30/81	Terramycin 250 Mg. cap T q6h.	8	2	8	2
	begin 2 pm 1/30/81 last dose 8 Am 2/6/81	Am	Pm	Am	Am
1/1/81	Milk of Magnesia 30cc h.s. p.r.n.				
	for constipation				
1/30/81	Elixir Terpin Hydrate 4cc q4h p.r.n.				
	for cough				

DIAGNOSIS: Pneumonia			DIET: Regular
Fredericks, Steve	#672	AGE: 79	DR. Falls

CHARTING SITUATIONS

ACTIVITIES

SITUATION # 3

On February 3, 1981, you are working 3-11 and are assigned to medications. When you made rounds Mr. Timothy Brown told you his bowels had not moved for several days. You promised to check his PRN orders and give him whatever the physician had ordered. Records verify that he has not had a bowel movement for 3 days so you prepare the laxative ordered with your h. s. medications. At 7:30 p.m. when you return from supper the charge nurse tells you Mr. Brown is very agitated. He threw his dinner tray at the dietary worker and refuses to allow anyone in his room until he recieves his laxative. The charge nurse advises you to give Mr. Brown his PRN medication for anxiety also. You prepare and administer Mr. Brown's PRN's and his routine 8 p.m. medications.

KARDEX

DATE	MEDICATIONS	HOUR			
1/2/81	Crystodigin 0.1 Mg. Tab T q.h.s. (ck pulse)				8pm
1/2/81	Peritrate 10 Mg. Tab T q.i.d.	8	12	4	8
1/2/81	Milk of Magnesia 30cc hs. p.r.n.				
	for constipation				
1/21/81	Thorazine 25 Mg. Tab T q.8 h. p.r.n.				
	for agitation/anxiety				

DIAGNOSIS: Angina Pectoris / CHF
Organic Brain Syndrome

DIET: Mech Soft

Brown, Timothy # 354 AGE: 82 DR. Small

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CHARTING SITUATIONS

ACTIVITIES

SITUATION # 4

On February 3, 1981, you are working 3-11 and are assigned to medications. One of your patients is Mrs. Jane woods, a 25-year-old woman with Mulitple Sclerosis and a Urinary Tract Infection. When you check her after supper Mrs. Woods tells you she is tired and has not slept well recently. She would like her sleeping medication with her 8 p.m. routine medications. You check her kardex and prepare the PRN ordered and her other 8 p.m. medications you sign out the seconal, there are 23 capsules remaining.

KARDEX

DATE	MEDICATIONS	HOUR			
12/20/80	Azo-gantrisin 0.5 Gm. Tab ṫ q.12 h.	8			8
12/20/80	Milk of Magnesia 30 c.c. q.h.s.				8
12/20/80	Tigan 100 mg. cap ṫ q.8 h. p.r.n./nausea				
12/20/80	Seconal 100 mg. cap ṫ h.s. p.r.n./sleep				

DIAGNOSIS: Multiple Sclerosis Urinary Tract Infection			DIET: Regular
Woods, Jane	# 321	AGE: 25	DR. Hall

MEDICATION PREPARATION
CHECK LIST

ACTIVITIES

U   S

_____ _____ 1. Verify medication order (using method given) with doctor's orders or patient's chart.

_____ _____ 2. Adhere to limitations of medications able to prepare.

_____ _____ 3. Obtain medication keys (and control book if indicated) and unlock medication area.

_____ _____ 4. Wash hands according to proper technique (30 second wash).

_____ _____ 5. Select correct container of medication.

_____ _____ 6. Verify label for type and dosage of medication.

_____ _____ 7. Open container and pour medication correctly for type ordered.

_____ _____ 8. Verify (poured) medication with medication order.

_____ _____ 9. Close container properly and verify third time.

_____ _____ 10. Record narcotics or controlled drugs properly (verify drug count).*

_____ _____ 11. Store medication properly (for type).

_____ _____ 12. Alter state of medication properly.*

* if applicable

MEDICATION PREPARATION
CHECK LIST

ACTIVITIES

U S

_____ _____ 13. Obtain any additional equipment necessary to administer medication.*

_____ _____ 14. Lock or secure medication area when finished.

_____ _____ 15. Clean up preparation area.

_____ _____ 16. Maintain medical asepsis throughout task.

_____ _____ 17. Sequence steps of medication preparation correctly.

_____ _____ 18. Meet time limit.

* if applicable

* *

(To pass the test on medication preparation you must have all items marked satisfactory on this check list.)

INSTRUCTIONS

1. Check with your teacher to make certain you have completed all activities.

2. If all activities are completed and you feel you have reached the objective tell your teacher you are ready for the "Master Test".

3. If all activities are completed and you do not feel ready to take the "Master Test."

SEE YOUR TEACHER

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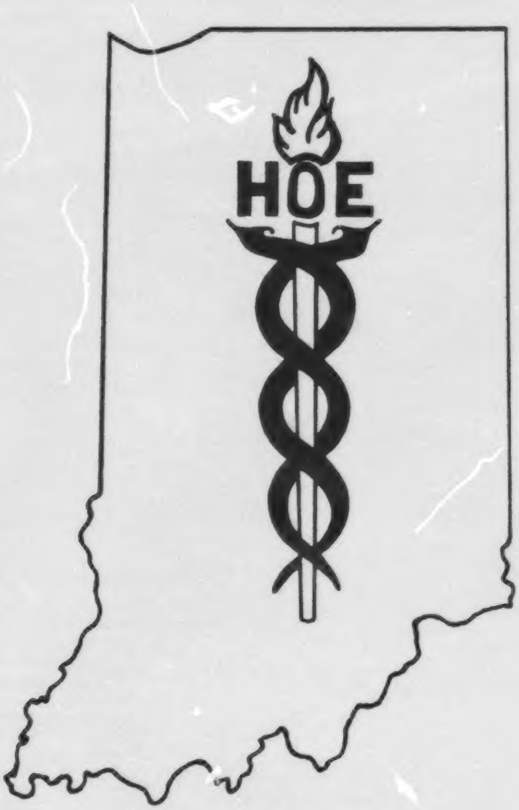
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

# A - 9 - 24

ADMINISTRATION OF ORAL MEDICATIONS

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

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ADMINISTRATION OF ORAL MEDICATIONS

GOAL

One of the most common methods of treating patients today is medication by mouth (orally). All medication must be prepared and administered correctly to give the patient as much protection as possible.

Administering oral medications may sound fairly easy, but that isn't always true. Suppose the patient isn't in his/her unit or doesn't want to take the medication. What if the patient tends to choke easily or spits the medication out? These and many other problems must be handled daily by members of the health care team who are assigned to prepare and administer oral medications.

This module has been designed to assist specific health care workers to:

1. administer oral medication correctly.
2. alter administration of oral medications to meet the patient's needs.
3. observe the patient during administration of oral medication.
4. record the administration of oral medications and observations correctly.

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USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

ADMINISTRATION OF ORAL MEDICATIONS

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study and/or performance:

1-28. All areas of study listed for #A-9-23 (Preparation of Oral Medications)

29. #A-9-23 - Preparation of Oral Medication

30. Observation Of A Patient

31. Moving A Patient In Bed

32. Feeding A Patient

33. Essentials Of Charting

34. Measure Oral Intake For A Patient

35. Clear An Obstructed Airway For A Patient

* *

If you have completed these areas of study

GO ON TO THE NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

ADMINISTRATION OF ORAL MEDICATIONS

OBJECTIVE

1. Given one of four possible patient situations involving standard methods of administration; a prepared oral medication; proper administration equipment; a student patient in a simulated patient unit and an oral medication administration check list, you will:

    a. employ the "5 rights" of medication administration
    b. administer the medication to the patient
    c. record the administration of the medication with observation
    d. complete the task within 10 minutes
    e. attain 100% accuracy on the check list

2. Given one of four possible patient situations involving altered methods of administration; a prepared oral medication; proper administration equipment; a student partner in a simulated patient unit and an oral medication administration check list, you will:

    a. employ the "5 rights" of medication administration
    b. employ necessary steps to care for patient's needs
    c. administer the medication to the patient
    d. record the administration of the medication with observations and/or alterations
    e. complete the task in a reasonable period of time (determined by instructor)
    f. attain 100% accuracy on the check list

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services.

Vol. 3, pp. 75 - 77.

You should read the text assignment before going to class. (If this text is not available, check the teacher's list for other references).

TEACHER LECTURE:

"Principles of Medication Administration"

Check the bulletin board for the time and place of the lecture. If the lecture is given more than once you may sign up for the time of your choice. You are responsible for attending the lecture at the proper time and place. An outline of the lecture follows in this module.

TEACHER DEMONSTRATION:

"How to Administer Oral Medicaion to a Patient"

Check the bulletin board for the time and place of the demonstration. If the demonstration is given more than once, you may sign up for the time of your choice. An outline of the demonstration is included in this module. You are responsible for attending the demonstration at the right time and place.

LABORATORY ASSIGNMENT:

"Medication Administration"

To help you in your ability to administer oral medications, you will find a prepared assignment and check list. Check the schedule for your assigned laboratory time and location. Do this assignment only after you have heard the lecture and seen the demonstration unless you have the teacher's permission to do so.

STUDENT PARTNER:

It is desirable that you practice in the laboratory with a student partner observing the check list while you practice, then you observe your partner. Working together usually helps both students. If you do not have a partner see your teacher.

All activities should be completed before taking the "Master Test."

LECTURE OUTLINE

"Principles of Medication Administration"

ACTIVITIES

As you listen to the lecture, be sure to note the following:

1. Review of the Principles of Medical Asepsis
    a. handwashing technique
    b. handling of medication
    c. handling of patient's personal articles
    d. care of used equipment and/or supplies
2. The "5 Rights" of Medication Administration
    a. right medication
    b. right dosage
    c. right patient
    d. right time
    e. right method of administration
3. The Supplies Necessary for the Administration of Oral Medications
    a. pitcher of water
    b. glass and straw
    c. supplies for alteration of administration
        (1) additional glass(es)
        (2) additional or alternate liquid
        (3) additional straw(s) or spoons
        (4) indicated soft food
4. Factors That Influence Administration of Medications
    a. mobility of patients
        (Examples: to x-ray, laboratory, therapies, visiting, etc.)
    b. activities of patient
        (Examples: daily routine, Physician's visits, treatments, etc.)
    c. desires and needs of patient
        (Examples: patient not wanting medication, patient nauseated or not feeling well, etc.)

ACTIVITIES

4. Cont.
   - d. ability to communicate with patient
     (Examples: language barrier, change in physical condition, etc.)
   - e. position of patient
     (Examples: unable to move self, in or attached to special devices, etc.)
   - f. ability of patient to take medication
     (Examples: difficulty swallowing, feeding tube, etc.)

5. Observations While Administering Medications
   - a. make observations continuously
     - (1) before administration
     - (2) during administration
     - (3) after administration
   - b. use all your senses - especially sight, hearing and touch
     (Examples: seeing skin eruptions, hearing breathing irregularities or feeling weak or slow pulse)
   - c. relate observations to possible medication reactions or side-effects
   - d. If true reaction or side-effect suspected - DO NOT proceed with medication administration until superior is consulted
   - e. make certain patient is safe from physical harm (side rails, etc.)

6. Recording Medications and Observations
   - a. record promptly (DO NOT WAIT UNTIL END OF SHIFT)
   - b. record pertinent information
     - (1) medication
     - (2) amount given
     - (3) time given
     - (4) route of administration
     - (5) any unusual reactions to medication or refusal

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ACTIVITIES

6. Cont.
   - c. additional observations
     - (1) comments by patient
     - (2) signs or symptoms seen or felt
     - (3) consultation with superior

7. Follow-Up on Administered Medication
   - a. check on patient later to see if desired results were achieved
   - b. check on patient later for cumulative action of medication - especially if regulating dosage

     (Example: pulse and/or blood pressure for heart or blood pressure medication)
   - c. check patient later for delayed reaction

     (Example: skin rash, chilling, nausea, etc.)

DEMONSTRATION OUTLINE

"How To Administer Medication To A Patient"

ACTIVITIES

As you watch the demonstration, be sure to note the steps for:

A. Administering An Oral Medication

1. Check to make certain all supplies and equipment have been assembled for administration of medication.
2. Check to make certain medication area is locked or secured.
3. Wash hands in adjacent facilities.
4. Take medication tray, with medication, water, any equipment and medication card (if used) to patient's assigned unit.
5. Establish patient's identity (by name-band or given method of agency).
6. Make certain patient is in proper position to swallow medication.
7. For a unit-dose oral medication, make final verification of medication, dosage, time and method of administration. (For oral medication prepared from a multiple-dose container, this step is omitted.)
8. Explain to patient the task you are going to perform. (If patient is not conscious DO NOT PROCEED - inform your superior.)
9. Open unit-dose package (omitted if medication from multiple-dose container).
10. Mix medication with liquid or soft food according to direction (if indicated).
11. Give patient any necessary instructions (e.g. with sub-lingual or buccal).

DEMONSTRATION OUTLINE

ACTIVITIES

A. Cont.

12. Give medication to patient or assist patient with medication as needed.
13. Assist patient with water or liquid needed to swallow medication. (If medication is a cough medication DO NOT give liquids following administration.)
14. Check to make certain patient was able to swallow medication.
15. Make patient comfortable.
16. Place call bell where patient can reach it.
17. Check patient for any immediate reactions to medication.
18. Take medication tray back to preparation area.
19. Dispose of any waste materials in proper manner.
20. Clean medication tray and put away properly.
21. Chart medication administered and any observations made.

B. Administering Oral Medication If Patient Is Not In Unit

1-4. Same as steps 1-4 of Administering Oral Medications

5. Check to see if patient is close at hand; if so take medication to area where patient is located or return patient to own unit. (If patient is not close at hand, check with superior to find out what you should do.)
6. If patient becomes available, proceed with steps 5-21 of the demonstration "Administering Oral Medication."
7. If patient is unavailable, take medication back to medication area and check with superior to see if medication can be retained.
8. If medication can be retained, store in safe place until patient returns.

DEMONSTRATION OUTLINE

ACTIVITIES

B. Cont.

9. If medication cannont be retained dump if down closest large-hole drain and flush away with running water.
10. If medication is a narcotic or controlled drug, attain sign out book, turn to correct drug sheet, find entry of destroyed medication and change "time given" to "wasted" so that medication can be given later if needed.
11. Chart inability to administer medication at appropriate time.

C. Administering Oral Medications If Patient Refuses Medication

1-8. Same as steps 1-8 of Administering Oral medication

9. If patient refuses this medication, make at least two (2) attempts to convince the patient to take it. Explain the importance of the medication, and if permitted by the physician, the exact purpose of the medication.
10. If you are still unable to convince the patient to take the medication, take it from the patient's unit and inform your superior immediately.
11. Follow the instructions given by your superior as to the way to proceed. If the medication is to be retained or disposed of follow steps 8-10 found in "Administering Oral Medications If Patient Is Not In Unit."
12. Chart the incident and the manner in which it was handled.

D. Administering Sub-Lingual or Buccal Oral Medication

1-10. Same as steps 1-10 of "Administering Oral Medications."

11. Explain to patient that medication must be held, under tongue if sub-lingual, or between gum and cheek if buccal, unitl dissolved. Caution not to swallow medication or drink fluids until dissolved.
12. Place medication under the tongue if sub-lingual or between the gum and cheek if buccal - DO NOT GIVE FLUIDS.

13-19. Same as steps 15-21 of "Administering Oral Medications"

DEMONSTRATION OUTLINE

ACTIVITIES

E. Administering Oral Medication If Patient Unable to Assist Self

1-11. Same as steps 1-11 of "Administering Oral Medications."

12. Give patient a drink before giving medication if mouth is extremely dry.

13. Place unit dose or medication cup to patient's mouth and "pour" medication into mouth. (If patient has difficulty swallowing, place medication far back on tongue.

14-22. Same as steps 13-21 of "Administering Oral Medications."

PRACTICE
MEDICATION ADMINISTRATION

INSTRUCTIONS

1. During your scheduled laboratory time:
    a. have your partner be your "patient."
    b. select at least two of the Standard Medication Administration Situations.
    c. find the corresponding Kardex cards for your situations.
    d. go to the medication area, obtain the prepared medication and administer the medication to your "patients."
    e. follow the performance check list.
    f. after you complete your practice of Standard Medication Administration read the Altered Situations and discuss them with your lab partner.
    g. be prepared to describe to your teacher what actions you would take in each of the Altered Situations.
2. Be the "patient" while your partner administers medication.

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PATIENT SITUATIONS

ACTIVITIES

SITUATION # 1

On February 1, 1981, you are assigned to give medications on the 7-3 shift. One of your patients is Mrs. Betty Jones, age 68, in room 653. She has Diabetes and Angina Pectoris. After reporting you make rounds to see all of your patients. Mrs. Jones tells you she is having dull chest pain and asks for her pain medication. You return to the nurses' station and prepare Mrs. Jones' 8:00 a.m. medications and her PRN for pain. The codeine bottle you pour from contains 30 tablets. When you administer Mrs. Jones' medications she complains of shortness of breath but takes the medications without difficulty. At 8:30 a.m. when you check her again, Mrs. Jones says her pain is gone and she is resting. Chart the medications you gave and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
1/16/81	Nitrobid Span 2.5 mg. ṫ daily	8AM			
1/16/81	Diabenese 250 mg - Tab ṫ daily	8AM			
1/16/81	Metamucil 2 rounded Teaspoons in				
	full glass of water - daily	8AM			
1/16/81	Codeine 30 mg. Tab ṫ q4h. p.r.n./pain				

DIAGNOSIS: Diabetes Angina Pectoris			DIET: 1200 cal Diabetic
Jones, Betty	#653	AGE: 68	DR. White

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Jones, Betty PHYSICIAN White MEDICAL CASE # 128765

NURSES NOTES

30 DAY MEDICATION RECORD Feb. 1981

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
1/16/81 Nitrobid Span 2.5 mg give one daily 8Am	8																	
1/16/81 Diabenese 250 mg. give one Tab daily 8Am	8																	
1/16/8: Metamucil powder. give 2 rounded Teaspoons in full glass of water daily	8																	
1/16/81 Codeine 30 mg Tab T q4h prn for pain	P R N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies				
DIAGNOSIS	Diabetes, Angina Pectoris	Diet	1200 cal. diabetic		
PHYSICIAN	Dr. White	Rehab Potential	fair		
PATIENT	Jones, Betty	ROOM # 653	PATIENT # 128765	MONTH & YEAR Feb. 1981	

Module #A-9-24

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN.
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Jones, Betty

PATIENT SITUATIONS

ACTIVITIES

SITUATION # 2

On February 1, 1981, you are assigned to give medications on the 7-3 shift. When you make rounds you find that your patient, Mr. Steve Fredericks, is coughing so much he cannot eat his breakfast. Mr. Fredericks has pneumonia. You check his Kardex and prepare his 8 a.m. medications and his PRN for coughing. Mr. Fredericks takes his PRN, but refuses his other medications. You return at 8:30 a.m. to check him. His cough has subsided and he is resting. He still refuses to take his regular medications. Chart the medications you gave and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
1/1/81	Multicebrin cap T q.d.	8			
1/30/81	Terramycin 250 mg. cap Ṫ q.6 h.	8	2	8	2
	begin 2 pm 1/30/81 last dose 8 Am 2/6/81	Am	pm	Am	Am
1/1/81	Milk of Magnesia 30cc. h.s. p.r.n.				
	for constipation				
1/30/81	Elixir Terpin Hydrate 4cc. q4h p.r.n.				
	for cough				

DIAGNOSIS: Pneumonia			DIET: Regular
Fredericks, Steve	#672	AGE: 79	DR. Falls

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Fredericks, Steve PHYSICIAN Dr. Falls MEDICAL CASE # 11806

NURSES NOTES

30 DAY MEDICATION RECORD

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
1/1/81 Multicebrin cap Ṫ qd	8																	
1/30/81 - begin 2 pm Terramycin 250 mg Cap T q 6 h	8A																	
	2P						LAST DOSE											
	8P						8 Am											
	2A						2/6/81											
1/1/81 Milk of Magnesia 30cc h s. prn constipation	P																	
	R																	
	N																	
	8																	
1/30/81 Elixir Terpin Hydrate 4cc q 4 h prn cough	P																	
	R																	
	N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies				
DIAGNOSIS	Pneumonia	Diet	Regular		
PHYSICIAN	Dr. Falls	Rehab Potential	fair		
		ROOM #	PATIENT #	MONTH & YEAR	
PATIENT	Fredericks, Steve	672	11806	Feb 1981	

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN.
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Fredericks, Steve 435

PATIENT SITUATIONS

ACTIVITIES

SITUATION # 3

On February 3, 1981, you are working 3-11 and are assigned to medications. When you made rounds Mr. Timothy Brown told you his bowels had not moved for several days. You promised to check his PRN orders and give him whatever the physician had ordered. Records verify that he has not had a bowel movement for 3 days so you prepare the laxative ordered with your h. s. medications. At 7:30 p.m. when you return from supper the charge nurse tells you Mr. Brown is very agitated. He threw his dinner tray at the dietary worker and refuses to allow anyone in his room until he receives his laxative. The charge nurse advises you to give Mr. Brown his PRN medication for anxiety also. You prepare and administer Mr. Brown's PRN's and his routine 8 p.m. medications. At 8:30 p.m. when you return he is quiet and more comfortable. His bowels have not moved. Chart the medications you gave and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
1/2/81	Crystodigin 0.1 Mg. Tab T q.h.s. (ck pulse)				8pm
1/2/81	Peritrate 10 Mg. Tab T q.i.d.	8	12	4	8
1/2/81	Milk of Magnesia 30cc. hs. p.r.n.				
	for constipation				
1/21/81	Thorazine 25 Mg. Tab T q8h p.r.n.				
	for agitation/anxiety				
DIAGNOSIS: Angina Pectoris / CHF Organic Brain Syndrome		DIET: Mech Soft			
Brown, Timothy	# 354	AGE: 82	DR. Small		

Module #A-9-24

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Brown, Timothy PHYSICIAN Dr. Small MEDICAL CASE # 44402

NURSES NOTES

30 DAY MEDICATION RECORD

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
1/2/81 Peritrate 10 mg Tab T gid	8																	
	12																	
	4																	
	8																	
1/2/81 Crystodigin 0.1 mg Tab T g hs (check pulse)	Pulse →																	
	8PM																	
1/2/81 Milk of Magnesia 30cc hs prn for constipation	P																	
	R																	
	N																	
	8																	
1/21/81 Tiorazine 25 mg Tab T g8h prn agitation - anxiety	P																	
	R																	
	N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies				
DIAGNOSIS	Angina Pectoris, CHF Organic Brain Syndrome	Diet	Mechanical Soft		
PHYSICIAN	Dr. Small	Rehab Potential	Fair		
PATIENT	Brown, Timothy	ROOM # 354	PATIENT # 44402	MONTH & YEAR Feb 1981	

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN.
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Brown, Timothy

PATIENT SITUATIONS

ACTIVITIES

SITUATION # 4

On February 3, 1981, you are working 3-11 and are assigned to medications. One of your patients is Mrs. Jane woods, a 25-year-old woman with Multiple Sclerosis and a Urinary Tract Infection. When you check her after supper Mrs. Woods tells you she is tired and has not slept well recently. She would like her sleeping medication with her 8 p.m. routine medications. You check her Kardex and prepare the PRN ordered. After you sign out the medication, there are 23 capsules remaining. Mrs. Woods takes her 8 p.m. medications and at 8:30 p.m. is sleeping soundly. Chart the medications you administered and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
12/20/80	Azo-gantrisin 0.5 Gm Tab Ṫ q12h	8			8
12/20/80	Milk of Magnesia 30 cc q.h.s				8
12/20/80	Tigan 100 mg cap ṫ q8h prn/nausea				
12/20/80	Seconal 100 mg cap ṫ h.s. prn/sleep				

DIAGNOSIS: Multiple Sclerosis Urinary Tract infection
DIET: Regular
Woods, Jane
321
AGE: 25
DR. Hall

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Woods, Jane PHYSICIAN Dr. Hall MEDICAL CASE # 99876

NURSES NOTES

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Module #A-9-24

30 DAY **MEDICATION RECORD** Feb 1981

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
12/20/80 Azo-gantrisin 0.5 gm Tab + q 12 h	8 8																	
12/20/80 Milk of Magnesia 30 cc q hs	8pm																	
12/20/80 Tigan 100 mg cap T q 8 h prn for nausea	P R N																	
12/20/80 Seconal 100 mg cap T hs p.r.n. for sleep	P R N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies				
DIAGNOSIS	Multiple Sclerosis Urinary Tract Infection	Diet	Regular		
PHYSICIAN	Dr. Hall	Rehab Potential	Poor		
PATIENT	Woods, Jane	ROOM #	PATIENT #	MONTH & YEAR	
		321	99876	Feb 1981	

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN.
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Woods, Jane

ALTERED SITUATIONS
FOR
MEDICATION ADMINISTRATION

ACTIVITIES

ALTERED SITUATION #1

Mrs. Betty Jones is having difficulty swallowing her medications. This morning when you prepare her medications the charge nurse suggests that you could give them with soft food. Administer her 8 a.m. medications with an appropriate soft food. Chart what you did.

ALTERED SITUATION #2

On February 5, 1981, you take Mr. Steve Fredericks 2 p.m. dose of Terramycin to his bedside. He says his stomach has been hurting since he took the 8 a.m. medication. He refuses to take the 2 p.m. dose until you check to see if his discomfort could be caused by the Terramycin. What will you do? How will you chart?

ALTERED SITUATION #3

On February 4, you take Mr. Timothy Brown's 8 p.m. medications to his bedside. When you check his pulse you find it is 52 beats per minute. What will you do? What will you chart?

ALTERED SITUATION #4

On February 4, when you are administering 8 p.m. medications, Mrs. Jane Woods is not in the facility. The charge nurse tells you she has gone out with her family and will return at 9 p.m. How will you handle her medications? What will you chart?

MEDICATION ADMINISTRATION
CHECK LIST

ACTIVITIES

U	S	
____	____	1. Check to make certain all supplies and equipment are present for administration of medication.
____	____	2. Check to make certain medication area is locked or secured.
____	____	3. Wash hands according to the proper technique.
____	____	4. Take medication (by proper method) to correct patient unit.
____	____	5. Identify patient and verify medication for type, dosage, mode of administration, and time.
____	____	6. Communicate with the patient.
____	____	7. Take care of any prior needs patient may have (if applicable).
____	____	8. Position patient to take medication (if indicated).
____	____	9. Administer medication correctly for mode of administration (assist patient if indicated).
____	____	10. Observe patient before, during and after administration of medication.
____	____	11. Make patient comfortable and give call bell after administration of medication.

MEDICATION ADMINISTRATION
CHECK LIST

ACTIVITIES

U S

_____ _____ 12. Return to medication area and clean properly.

_____ _____ 13. Proceed correctly if unable to administer medication.

_____ _____ 14. Maintain medicatal asepsis throughout task.

_____ _____ 15. Record medicatins and observations correctly.

_____ _____ 16. Sequence steps correctly for administration of medication.

_____ _____ 17. Meet the time limit (if applicable).

_____ _____ 18. Maintain 100% accuracy on check list.

* *

(To pass the test on medication administration, you must have all items marked satisfactory on this check list.)

INSTRUCTIONS

1. Check with your teacher to make certain you have completed all activities.

2. If all activities are completed and you feel you have reached the objective tell your teacher you are ready for the "Master Test".

3. If all activities are completed and you do not feel ready to take the "Master Test."

SEE YOUR TEACHER

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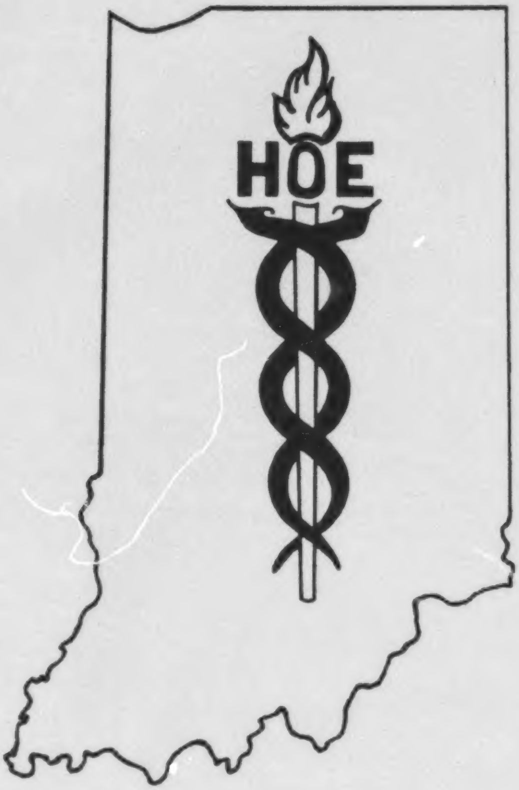
INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

A - 9 - 25

CONTROLLED MEDICATIONS - ACCURACY OF SUPPLY

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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CONTROLLED SUBSTANCES - ACCURACY OF SUPPLY

GOAL

Federal laws and regulations control the dispensing and administration of potentially addictive drugs such as narcotics, amphetamines, barbituates and hypnotics. Health facilities have established policies for accounting for controlled substances which are ordered by the physician and administered by health facility employees. Agency policies may vary but the general method by which the accuracy of records is established is standard.

This module will provide the health care worker with information and practice that will enable him/her to establish the accuracy of the controlled substance count and to locate and correct substance records.

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USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study and/or performance:

1. Organization of Health Care Agencies

2-23. All pre-requisite areas listed for # A - 9 - 23 - "Preparation of Oral Medications

24. # A - 9 - 23 - "Preparation of Oral Medications"

25-30. All pre-requisite areas listed for # A - 9 - 24 - "Administration of Oral Medications"

31. # A - 9 - 24 - "Administration of Oral Medications

* *

If you have completed these areas of study

GO ON TO THE NEXT PAGE

If you have not completed all of these areas of study

SEE YOUR TEACHER

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CONTROLLED MEDICATIONS - ACCURACY OF SUPPLY

Your Objective for this task consists of two (2) parts as follows:

OBJECTIVE

1. Give one of two possible situations, access to the proper equipment, a student partner and proper check list, you will:
    a. obtain the necessary equipment to count the designated controlled medications
    b. count the given medications according to rules and regulations and verify the count
    c. record and/or report results of count
    d. complete the task within 7 minutes
    e. attain 100% accuracy on the check list

2. Immediately upon successful completion of a routine medication count, given one of two possible situations in which there is an error in the count, the proper equipment, a student partner and a proper check list, you will:
    a. count the given medication - according to rules and regulations and verify with partner
    b. locate the error and correct (if possible)
    c. record and/or report results of count correctly
    d. complete the task within a reasonable period of time (teacher discretion)
    e. attain 100% accuracy on the check list

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services.

Vol. 3, pages 67 and pages 73 - 74.

(If this text is not available, check the teacher's list for other references and read one of them before going to class.)

TEACHER LECTURE:

"Principles of Counting Controlled Drugs"

Check the bulletin board for the time(s) of the lecture. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) An outline of the lecture follows.

TEACHER DEMONSTRATION:

"How to Count Controlled Drugs"

Check the bulletin board for the time(s) of the demonstration. If it is given more than once, you may sign up for the time of your choice. You are responsible for knowing the time and location of the correct demonstration. An outline of the demonstration is included in this module.

LABORATORY ASSIGNMENT:

"Counting Controlled Drugs"

To help you in your ability to count Schedule II controlled drugs, you will find a specific laboratory practice assignment. Do this assignment only after you have heard the lecture and seen the demonstration (unless you have the teacher's permission to do so.) Check the schedule for your assigned laboratory time and location.

STUDENT PARTNER:

It is necessary that you practice in the laboratory with a student partner assisting you with the controlled drug count. It may be necessary to have a second partner observe the check list while you practice. Working together is usually the best thing for all to learn.

MASTER TEST

All activities should be completed before taking the "Master Test."

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LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture be sure to note:

1. Rules and Regulations of Controlled Drug Inventory

   a. required frequency of count - agency policy, usually at shift change
   b. required personnel needed
   c. required methods of storage - double lock - Schedule II
   d. proper methods of counting - different types of containers
   e. required methods of recording count - forms may vary
   f. proper methods of verification
   g. individual agency policies - may require counting of Schedule III or other drugs as deemed necessary

2. Supplies and Equipment Necessary to Perform Controlled Drug Count

   a. sign out book, ledger or folder
   b. keys to medication area where stored
   c. hand washing facilities
   d. medication storage area - usually double locked cabinet or drawer
   e. medication Kardex
   f. designated controlled drugs
   g. patient's charts (near at hand)

3. Common Reasons for Errors in Controlled Drug Count

   a. medication nurse in hurry and forgot to sign out for drug
   b. medication nurse made error in recording current count (subtraction, recorded previous number, etc.)
   c. medication nurse recorded controlled drug on wrong record sheet
   d. medication nurse forgot to record controlled drug that was wasted or borrowed

ACTIVITIES

3. Cont.

   e. controlled drug count incorrect upon receipt from pharmacist
   f. controlled drug stolen

4. Helpful Hints and Precautions for Counting Controlled Drugs

   a. give yourself time for a full count - don't hurry
   b. if at all possible actually count the medication you have on hand each time you "pour" a controlled drug
   c. always record the controlled drug as you "pour it"
   d. when controlled drugs are refused or wasted, record same as soon as possible
   e. maintain a systematic order for storing and counting; maintain record sheets in that same order
   f. check any error immediately; if unable to validate, report to superior at once
   g. validate the count of medication upon receiving a new supply from the pharmacist; report at once if an error exists
   h. always keep the keys to the medication storage area secure
   i. always keep the medication storage area locked unless you are present
   j. for your protection follow your agency policies for handling controlled drugs at all times

DEMONSTRATION OUTLINE

ACTIVITIES

As you watch the demonstration be sure to observe the following:

A. Steps In Counting Controlled Drugs

1. Obtain the sign out records and keys to the medication area.
2. Obtain assistance of qualified personnel to count controlled drugs.
3. Position helper close to medication area with sign out records.
4. Unlock medication area.
5. Wash hands in adjacent facility.
6. Select container and read the label giving medication name and strength.
7. Inform person with sign out record which controlled drug you are counting (or count in order of sign out records).
8. Establish supply of medication on hand in the following manner:
   a. for unit dose, count the number of doses you have in the container.
   b. for a controlled dispenser, look at the top of the dispenser and observe the number or compartments in which there is medication.
   c. for a liquid medication in a container with calibrations, hold the calibrated container at eye level, place thumb nail at level of medication and determine amount of medication in container with calibration.
9. Give medication count to the person with the sign out records.
10. Listen for your helper's verification of the count.
11. After count has been verified, return the container to the proper place.
12. Continue through steps 6 - 11 for each controlled drug to be counted.

DEMONSTRATION OUTLINE

ACTIVITIES

A. Cont.

13. When all medication is counted, turn to or obtain the record sheet for count verification.
14. Both you and your helper sign your names, time and date of verification of the controlled drug count.
15. Lock the medication container.
16. Clean up the medication area, if indicated.
17. Return the sign out records and keys to the proper place.
18. Report count to superior, if indicated.

B. Steps In Handling Errors In Controlled Drug Count

1-10. Sames as steps 1-10 for "Counting Controlled Drugs."

11. If your count and the sign out record do not coincide, state your count again, to make certain you were understood.
12. If they still do not coincide, recount the medication in the container.
13. Give the second medication count to the person with the sign out record.
14. If the count and sign out record coincide now, proceed to step #11 of "Counting Controlled Drugs."
15. If the count and the sign out record still do not coincide, proceed in the following systematic manner:
    a. check sign out record to make certain it is the correct one for the medication being counted. If not, turn to the correct record.
    b. check the sign out record to determine if there has been an error in recording or count (e.g. recording previous number, subtraction error, etc.) If so, error, verify the count, and proceed with task.

ACTIVITIES

B. 15. Cont.

c. check Kardex and/or medication sheets to determine which patient is receiving the specific medication in question.

d. check patient chart to determine if controlled drug was given but not signed out on sign out record. If there was a dose not signed out, record drug, dosage, date, and time, plus name of person who gave the medication, followed by your initials in parentheses. Then verify the count and proceed with the task.

16. If error is not established after the above systematic search, contact your superior immediately and proceed in the manner advised. DO NOT use any controlled drug from a container that does not have a verified count and sign out record.

COUNTING
CONTROLLED MEDICATIONS

INSTRUCTIONS

1. During your scheduled laboratory time:
    a. Have your student partner assist you.
    b. Go to the medication area for counting controlled medications.
    c. Turn to the situations on routine counting of controlled drugs and practice both situations. Count the drugs and verify the count using the sign out sheets and verification sheets found on the following pages. Follow the performance check list.
    d. Look at the altered situations. *Examine the accountability records for each situation, try to locate the error, and correct it.
    e. Be sure to keep in mind those items given in the lecture and demonstration.

2. Assist your partner and classmates in counting controlled drugs.

* At the time of testing, you will draw for the situation you will perform. Upon successful completion of the routine situation, you will immediately perform the alteration for that situation.

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Module #A-9-25

ROUTINE SITUATIONS
COUNTING CONTROLLED MEDICATIONS

ACTIVITIES

SITUATION # 1

On February 3, 1981, you are a Medication Aide on the 3 - 11 shift and are assigned to count Controlled Medications with the off-going 7 - 3 nurse. In the nursing home where you work only Schedule II drugs are counted. In the double locked cabinet you find Schedule II drugs for two patients:

Codeine 30 mg - Betty Jones
Seconal 100 mg - Jane Woods

Look at the forms provided for this situation. Count the medications according to the method you have learned and verify the count.

SITUATION # 2

On March 1, 1981, you are working 7 - 3 in a State Psychiatric Hospital and are assigned to administer medications. On the floor where you work Schedule II and III medications are received in boxes of 25 individual doses and are used from the same box for all patients who have the drug ordered. You go to the medicine room to count with the off-going nurse. There are two boxes of medication in your double-locked cabinet which must be counted:

Ritalin 5 mg.
Dalmane 30 mg.

Count the medications according to the method you have learned, verify the count, and complete the records provided with this situation.

EIGHT HOUR VERIFICATION
OF INDIVIDUAL PATIENTS NARCOTIC RECORD

DATE	SHIFT	SIGNATURE ON-COMING NURSE	SIGNATURE OFF-GOING NURSE	DATE	SHIFT	SIGNATURE ON-COMING NURSE	SIGNATURE OFF-GOING NURSE
1/31/81	3pm	Jan Adams LPN	Pat Green RN				
1/31/81	11pm	Wanda Rice QMA	Jan Adams LPN				
2/1/81	7Am	Pat Green RN	Wanda Rice QMA				
2/1/81	3pm	Joyce Reynolds RN	Pat Green RN				
2/1/81	11pm	Wanda Rice QMA	Joyce Reynolds RN				
2/2/81	7Am	Ann Sanders RN	Wanda Rice QMA				
2/2/81	3pm	Joyce Reynolds RN	Jean Jones RN				
2/2/81	11pm	Wanda Rice QMA	Michelle Green QMA				
2/3/81	7Am	Janet Clark RN	Wanda Rice QMA				

CONTROLLED SUBSTANCE RECORD

Drug Name and Strength: Seconal 100mgm caps.

Patient's Name: Woods, Jane

Script Number: 7891011

Patient's Number: 44611

Physician: Dr. Hall

Room Number: 321

Date	Time	Rec'd	Used	Bal	Signature
1/8/81	4pm	30	from pharmacy		Joan Adams L.P.N.
1/8/81	9pm		T	29	Joan Adams LPN
1/10/81	8^{30} pm		T	28	Ruth Williams QMA
1/15/81	9pm		T	27	Joan Adams L.P.N
1/24/81	9PM		T	26	Rebecca Collier RN
1/30/81	8^{30} pM		T	25	Ruth Williams QMA
1/31/81	8^{00} pm		T	24	Joan Adams L.P.N

CONTROLLED SUBSTANCE RECORD

Drug Name and Strength Codeine 30 Mg	Patient's Name Jones, Betty
Script Number 123456	Patient's Number 128765
Physician Dr. White	Room Number 653

Date	Time	Rec'd	Used	Bal	Signature
1/6/81	4pm	30	from pharmacy		Joan Adams L.P.N.

EIGHT HOUR VERIFICATION
OF INDIVIDUAL PATIENTS NARCOTIC RECORD

ATE	SHIFT	SIGNATURE ON-COMING NURSE	SIGNATURE OFF-GOING NURSE	DATE	SHIFT	SIGNATURE ON-COMING NURSE	SIGNATURE OFF-GOING NURSE
2/26/81	7Am	J. Green RN	P. Rose DMA.				
2/26/81	3pm	B. Richardson RN	J. Green RN				
2/26/81	11pm	P. Rose DMA	B. Richardson RN				
2/27/81	7Am	J. Green RN	P. Rose DMA				
2/27/81	3pm	L. White LPN	J. Green RN				
2/27/81	11pm	P. Rose DMA	L. White LPN				
2/28/81	7Am	J. Green RN	P. Rose DMA				
2/28/81	3pm	D. Williams RN	J. Green RN				
2/28/81	11pm	P. Rose DMA	D. Williams RN				

Module #A-9-25

STATE PSYCHIATRIC HOSPITAL
CONTROLLED SUBSTANCE RECORD

Drug: Dalmane 30 mg

Unit: 2-South

Date: 2/26/81

Rec'd by: Beth Richards RN

No.	Date	Time	Patient	Physician	Admin. by
25	2/26/81	9 pm	H. Cole	Dr Smith	B. Richards RN
24	2/26/81	9 pm	L. Burnett	Dr Smith	B. Richards RN
23	2/26/81	10 pm	D. Jensen	Dr Smith	B. Richards RN
22	2/27/81	9 pm	H. Cole	Dr Smith	R. White LPN
21	2/27/81	9 pm	A Stevens	Dr Smith	R White LPN
20	2/28/81	9 pm	H. Cole	Dr Smith	D Williams RN
19	2/28/81	9 pm	D Jensen	Dr Smith	D Williams RN
18	2/28/81	10^{30} pm	C. Field	Dr Smith	D Williams RN
17	2/28/81	11 pm	A Stevens	Dr Smith	D Williams RN
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1					

STATE PSYCHIATRIC HOSPITAL
CONTROLLED SUBSTANCE RECORD

Drug: Ritalin 5 mg	Unit: 2 - South
Date: 2/26/81	Rec'd by: Beck Richards RN.

No.	Date	Time	Patient	Physician	Admin. by
25	2/27/81	6 Am	John Jones	Dr. Smith	R. White LPN
24	2/27/81	6 Am	Peter Lake	Dr. Smith	R White LPN
23	2/28/81	6 Am	John Jones	Dr Smith	D. Williams RN
22	2/28/81	6 Am	Peter Lake	Dr Smith	D. Williams RN
21	3/1/81	6 Am	John Jones	Dr Smith	D. Williams RN
20	3/1/81	6 Am	Peter Lake	Dr Smith	D Williams RN
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ALTERED SITUATIONS
FOR
COUNTING CONTROLLED MEDICATIONS

ALTERED SITUATION #1

You are working 3 - 11 as a Medication Aide in a nursing home. When you count the Controlled Medications with the off-going nurse you find an error in the count. The container of Codeine 30 mg. for Betty Jones contains 29 tablets but the accountability records says there should be 30. Examine the accountability record below, locate the error, and correct it.

CONTROLLED SUBSTANCE RECORD

Drug Name and Strength Codeine 30mg	Patient's Name Jones, Betty
Script Number 123456	Patient's Number 128765
Physician Dr. White	Room Number 653

Date	Time	Rec'd	Used	Bal	Signature
1/16/81	4pm	30	from pharmacy		Jean Adams, LPN
2/3/81	8Am		T	30	Wanda Rice QMA

ALTERED SITUATION #2

You are working 7 - 3 in the State Psychiatric Hospital. When you count controlled medications with the off-going charge person, you find an error in the count. The Ritalin box contains 19 doses but the sign out record shows there should be 20 remaining. Examine the record below and look for a possible reason for the discrepancy.

STATE PSYCHIATRIC HOSPITAL
CONTROLLED SUBSTANCE RECORD

Drug: Ritalin 5 mg
Unit: 2 - South
Date: 2/26/81
Rec'd by: Beth Richards RN

No.	Date	Time	Patient	Physician	Admin. by
25	2/27/81	6 Am	John Jones	Dr. Smith	L. White LPN
24	2/27/81	6 Am	Peter Lake	Dr. Smith	L. White LPN
23	2/28/81	6 Am	John Jones	Dr. Smith	D. Williams RN
22	2/28/81	6 Am	Peter Lake	Dr. Smith	D. Williams RN
21	3/1/81	6 Am	John Jones	Dr. Smith	D. Williams RN.
20					
19					
18					
17					
16					
15					
14					
13					
12					
11					
10					
9					
8					

Module #A-9-25

CHECK LIST
FOR
COUNTING SCHEDULE II AND III CONTROLLED DRUGS

ACTIVITIES

U	S	
_____	_____	1. Obtain proper equipment for counting medication.
_____	_____	2. Procure qualified assistance for count.
_____	_____	3. Unlock medication area correctly.
_____	_____	4. Wash hands according to proper technique.
_____	_____	5. Identify medications correctly for each one counted.
_____	_____	6. Count medication correctly (according to method used on form of medication).
_____	_____	7. Verify each medication counted with partner.
_____	_____	8. Re-affirm count, if error.
_____	_____	9. Re-count medication and give second count.
_____	_____	10. Check sign out record for possible errors.*
_____	_____	11. Check doctor's orders and medication sheets in order to locate error.*
_____	_____	12. Correct error in proper manner.*
_____	_____	13. Verify and/or report correct count on written form.
_____	_____	14. Report to superior if unable to resolve error.*
_____	_____	15. Lock facilities and tidy medication area.
_____	_____	16. Sequence steps of task correctly.
_____	_____	17. Maintain medical asepsis throughout task.
_____	_____	18. Meet time limits.*
_____	_____	19. Maintain 100% accuracy on check list.

* if applicable

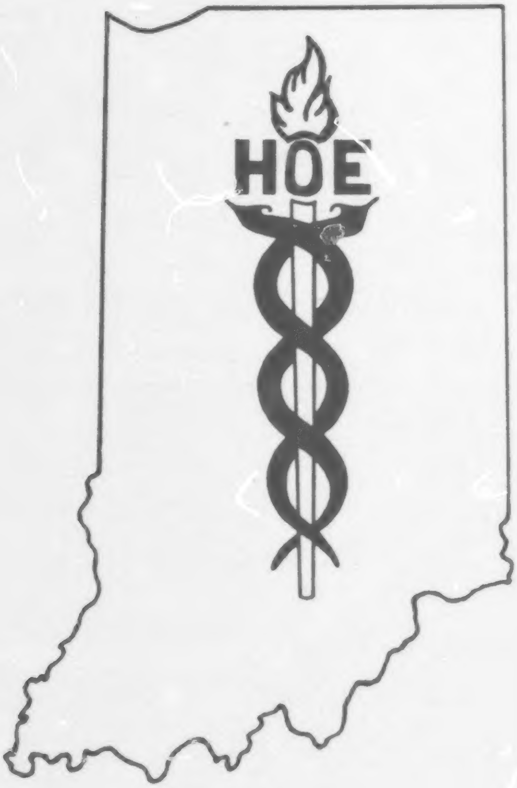
INSTRUCTIONS

1. Check with your teacher to make certain you have completed all activities.
2. If all activities are completed and you feel you have reached the objective tell your teacher you are ready for the "Master Test".
3. If all activities are completed and you do not feel ready to take the "Master Test."

SEE YOUR TEACHER

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

# A - 9 - 26

APPLICATION OF TOPICAL MEDICATION

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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APPLICATION OF TOPICAL MEDICATION

GOAL

Although the oral route of administering medications is the most common, in some instances it is not the most effective. In the case of certain skin irritations, diseases of the skin, or the need for medication to tissues just below the skin, the best method of administration may be that of applying the medication directly to the surface of the skin. (topically)

This module will enable the health care worker assigned to medications to become familiar with:

1. the principles of applying topical medications
2. the methods of applying topical medications
3. the methods of altering the application of topical medications to meet patients' needs
4. the methods of recording the application of topical medications

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USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

APPLICATION OF TOPICAL MEDICATION

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study and/or performances:

1. Drape A Patient For A Necessary Task.

2. Open Sterile Packages To Obtain Sterile Supplies For A Patient.

3. Change A Dressing For A Patient.

4-26. All pre-requisite areas listed for # A-9-23, "Preparation of Oral Medication"

27. # A-9-23 - "Preparation of Oral Medication"

28-33. All Pre-requisite areas listed for # A-9-24 "Administration of Oral Medication"

34. # A-9-24 "Administration of Oral Medication"

* *

If you have completed these areas of study

GO ON TO THE NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

APPLICATION OF TOPICAL MEDICATION

Your Objective for this task consists of two (2) parts as follows:

OBJECTIVE

1. Given one of four routine situations in which you are to apply a topical medication, access to the proper supplies and equipment, a student partner and a check list for "Routine Topical Application," you will:

    a. assemble the appropriate supplies and/or equipment for the two applications.
    b. apply the topical medication.
    c. record and/or report the application with observations.
    d. perform the application within 15 minutes.
    e. maintain 100% accuracy in all points with (*) on check list.
    f. maintain at least 75% accuracy in remaining points of check list.

2. Following the successful completion of routine application of topical medications you will discuss with your teacher the altered situations. Be able to describe what actions you would take in the altered situations.

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services.
Vol. 3, pages 124 - 126.
If this text is not available, check the teacher's list for other references. Read one of the references before going to class.

TEACHER LECTURE:

"Principles of Applying A Topical Medication"
Check the bulletin board for the time(s) of the lecture. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) An outline of the lecture can be found in this module.

TEACHER DEMONSTRATION:

"How to Apply A Topical Medication"
Check the bulletin board for the time(s) of the demonstration. If it is given more than once, you may sign up for the time of your choice. You are responsible for knowing the time and location of the correct demonstration. An outline of the demonstration can be found in this module.

LABORATORY ASSIGNMENT:

"Applying A Topical Medication"
To help you in your ability to apply a topical medication, you will find a specific assignment for laboratory practice. Do this assignment only after you have heard the lecture and seen the demonstration (unless you have the teacher's permission to do so.) Check the schedule for your assigned laboratory time and location.

STUDENT PARTNER:

It is necessary that you practice in the laboratory with a student partner acting as your patient for the topical application. It may be necessary to have a second partner observe the check list while you practice. Working together is usually the best way for all to learn.

MASTER TEST

All activities should be completed before taking the "Master Test."

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture on "Principles of Applying A Topical Medication" be sure to note the following:

1. Individual Limitations Regarding Application of Topical Medication
    a. level of health workers
    b. combination of topical application with other tasks (e.g., irrigations, total sterile technique, etc.)

2. Incorporation of Overall Principles of Medication Administration to Topical Application
    a. proper storage
    b. medical asepsis
    c. verification of order
    d. five (5) rights of medication administration

3. Specific Principles of Topical Medication
    a. correct form of topical medication
        (1) ointment or cream
        (2) lotion
        (3) liniment
    b. proper equipment and/or supplies needed (dependent upon drug form)
    c. purpose of medication being applied
    d. general effects and side-effects of medication

ACTIVITIES

4. Supplies Necessary For Application of Topical Medication

   a. patient's chart
   b. Kardex
   c. medication card (if applicable)
   d. keys for medication storage area
   e. medication storage area
   f. medicine tray
   g. correct topical medication
   h. supplies for lotion or liniment

      (1) sterile gauze square or cotton balls
      (2) sterile glove
      (3) bag or paper for discarding soiled supplies

   i. supplies for ointment or cream
      (1) sterile tongue blade
      (2) dressing supplies as needed
          (e.g. 4 X 4's, tape, stretch gauze, etc.)
      (3) bag or paper for discarding soiled supplies

5. Major Factors In Applying Topical Medication

   a. position of patient

      (1) good visualization of area
      (2) proper alignment
      (3) ease of application

ACTIVITIES

5. (Cont.)

   b. correct method for type of medication
      (1) spread ointments and creams directly on area, if possible)
      (2) swab lotions
      (3) rub liniments
   c. sequence of steps
      (1) maintain asepsis
      (2) conserve energy and supplies
      (3) remember other tasks that may be combined with application
   d. consider needs of patient
      (1) priority of needs (e.g. may be choking, needs to be aspirated, etc.)
      (2) safety factors
      (3) patient comfort (e.g. pain, need to eliminate, etc.)

6. Importance of Accurate Records

   a. medication applied - area, etc.
   b. other tasks - dressing, etc.
   c. observations made before, during, and after application (many times there are reactions to topical medications)

DEMONSTRATION OUTLINE

ACTIVITIES

As you watch the demonstration be sure to observe the following:

A. Steps In Applying A Lotion

1. Verify the order of the medication, dosage, mode of administration, time and site.

2. At the appropriate time proceed with task.

3. Go to medication storage area and unlock.

4. Wash hands in adjacent facilities

5. Obtain the topical medication and verify it with the doctor's order.

6. Place the topical medication on medicine tray and secure medication area.

7. From supply area obtain sterile gauze squares or cotton balls, a sterile glove and a bag or paper for discarding soiled supplies and place on tray.

8. Take medication tray with supplies and medication to patient's assigned unit.

9. Establish patient's identity (by name band or method for agency).

10. Explain to patient the task you are going to perform. (If unable to communicate, inform superior and proceed cautiously.)

11. If patient has prior needs, care for them according to your own abilities.

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DEMONSTRATION OUTLINE

ACTIVITIES

A. (Cont.)

12. Position patient as needed for topical application. (If up, return to bed, if indicated.)
13. Drape patient with area to be medicated exposed. (If area is extremely large, expose only small portion at a time.)
14. Remove any old dressings, if necessary.
15. Wash hands in adjacent facilities, if indicated.
16. Make final verification of medication, dosage, time, method of administration and area of application.
17. Open the container of medication and place cap upside down on tray.
18. Open the sterile gauze or cotton balls, preventing contamination.
19. Open sterile glove and place on the hand you will be using to apply topical medication.
20. With gloved hand, pick up several gauze squares or cotton balls.
21. With ungloved hand, pick up container of topical medication (label up).
22. Pour enough medication on gauze or cotton balls to cover affected area, or at least a portion of it. (Do not allow medication to drip from gauze or cotton.)
23. Swab or pat medication gently on affected area - DO NOT RUB. (Observe the skin for over-all appearance while applying medication.)

DEMONSTRATION OUTLINE

ACTIVITIES

A. (Cont.)

24. Continue steps 20-23 until all of affected area has been medicated sufficiently. (Change gauze squares or cotton balls as needed.)
25. Discard all soiled gauze or cotton into disposal bag or paper as used.
26. If necessary re-position drape and continue necessary steps until entire area has had medication applied.
27. When finished. remove glove and discard with soiled gauze or cotton balls.
28. Replace lid on medication container.
29. Gather up all items to be taken from patient's unit.
30. Make patient comfortable and safe; secure call bell.
31. Take all unncessary items from patient's room and dispose accordingly.
32. Chart application of medication, any dressings and all observations made before, during, and after application of topical medication.

B. Steps In Applying A Liniment

1-22. Same as steps 1-22 for "Application of Lotion"

23. Since liniments are to penetrate to deeper tissues, rub the medication in a circular fashion, but not too hard.

24-32. Sames as steps 24-32 for "Application of Lotion."

ACTIVITIES

C. Steps In Applying An Ointment or Cream.

1-6. Same as steps 1-6, "Applying A Lotion"

7. From supply area obtain sterile tongue blade(s), any dressing materials needed (e.g. 4 X 4's, tape or stretch gauze) and a bag or paper for disposal of soiled supplies and place on tray.

8-17. Same as steps 8-17, "Applying A Lotion."

18. Open a sterile tongue blade correctly making certain not to touch one end.

19. Squeeze or scoop ointment onto the sterile end of the tongue blade using only amount needed.

20. Apply the ointment to the designated area with gentle, firm strokes (Work in a pattern - circular, horizontal or vertical.) Forming a thin layer over affected area.

21. Continue to apply ointment until entire area is covered. If more ointment is needed, squeeze from container onto blade, without touching. If jar, obtain new blade for each amount of ointment.

22. When finished with tongue blade, break and discard in appropriate bag or paper.

23. Apply sterile dressing as indicated and secure with appropriate bag or paper.

24-28. Same as steps 27-32, "Applying A Lotion."

APPLICATION
OF
TOPICAL MEDICATION

INSTRUCTIONS

1. During your scheduled laboratory time:
    a. use a mannequin or have your partner be your patient.
    b. select at least two (2) of the patient situations on the following pages.*
    c. find the corresponding Kardex card for your situations.
    d. practice applying topical medications, according to the situations and Kardex, while following the performance check list.
    e. read the altered patient situations and discuss them with your lab partner.
    f. be prepared to tell your teacher what actions you would take in each of the altered situations.
    g. have a third person observe you during your practice if necessary.
    h. be sure to keep in mind those principles, factors and methods given in the lecture and demonstration.
2. Be a patient for your partner and, if necessary, observe others applying topical medications.

* (It is only necessary to practice two (2) of the patient situations. However, at the time of testing, you will draw for any one of the four given situations, to be followed by its corresponding altered situation.)

ROUTINE SITUATIONS

TOPICAL APPLICATIONS

ACTIVITIES

SITUATION # 1

This morning Susan Bateman, a resident in your health facility has a rash on her left ankle and lower leg. She complains of severe itching. Two days ago she went on a picnic at a nearby park and was exposed to poison ivy. When Dr. Koch was called he said Susan has poison ivy and ordered oral and topical medications. You are to apply the topical medication.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Temaril 5mg. Tab ṫ q.i.d.	9	1	5	9
2/1/81	Caladryl lotion - apply To				
	Left ankle + lower leg 9Am - 9pm	9			9

DIAGNOSIS: Acute Contact Dermatitis Mental Retardation			DIET: Regular
Bateman, Susan	# 654	AGE: 19	DR. Koch

ROUTINE SITUATIONS
TOPICAL APPLICATIONS

ACTIVITIES

SITUATION # 2

Amos Thompson, a patient on your floor, has a skin irritation on his back and upper legs due to incontinence. The doctor has ordered a topical medication to be applied to the excoriated areas. You are to apply the medication.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Librium 5mg., Tab T B.I.D.	9		5	
2/1/81	Crystodigin 0.1 mg. q.d. h.s. (ck pulse)				9
2/1/81	Gantrisin 0.5 gm. Tab. T q.i.d.	9	1	5	9
2/3/81	Zinc oxide ointment To irritated				
	areas on back + legs B.I.D.	9			9

DIAGNOSIS: Congestive Heart Failure Urinary Tract Infection	DIET: Regular

Thompson, Amos	# 723	AGE: 69	DR. James

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ROUTINE SITUATIONS

TOPICAL APPLICATIONS

ACTIVITIES

SITUATION # 3

Albert Larson, a resident at the State Hospital where you work, likes to work in the flower beds with the maintenance personnel. Yesterday he complained of pain and stiffness in his left shoulder after hoeing the flowers for several hours. The doctor ordered topical medication applied to the area. You are to apply the medication.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Soma 350 mg. Tab. ṫ q.i.d.	9	1	5	9
	x 5 days				
2/1/81	Bufferin Tabs ṫṫ q.4 h. P.R.N.				
	for pain				
2/1/81	Icy Hot Cream - apply Topically				
	To left shoulder B.I.D.	9			9
DIAGNOSIS: Muscle Strain - L Shoulder		DIET: Regular			
Larson, Albert	#249	AGE: 62	DR. Berry		

ROUTINE SITUATIONS
TOPICAL MEDICATIONS

ACTIVITIES

SITUATION # 4

Miranda Goodman has had a stroke and is paralyzed on her right side. She eats poorly and requires complete care. Yesterday the nurse noted a small decubitus on her coccyx. The doctor ordered a heat light for 20 minutes followed by a topical medication two times a day. The heat light treatment has been done by the nurse and you are to apply the topical medication.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Multicebrin cap T daily	9			
2/1/81	Imferon 2cc. I.M. q.o.d.	9	QOD		
2/1/81	Heat lamp To back B.I.D. x 20 min	9			9
	followed by:				
2/1/81	Kenalog ointment To decubitus				
	B.I.D.	9			9
DIAGNOSIS: CVA - R Hemiplegia Decubitus ulcer - coccyx		DIET: Regular			
Goodman, Miranda	# 418	AGE: 75	DR. Marsh		

CHECK LIST
FOR
ROUTINE TOPICAL APPLICATION

ACITVITIES

U S

_____ _____ 1. Verify order with doctor's order on Kardex and/or patient's chart.*

_____ _____ 2. Obtain keys for medication area and unlock.

_____ _____ 3. Wash hands before proceeding.*

_____ _____ 4. Verify label of medication with medication card on Kardex.*

_____ _____ 5. Assemble appropriate supplies and/or equipment for topical application.

_____ _____ 6. Identify patient in correct manner.*

_____ _____ 7. Explain task to patient.

_____ _____ 8. Verify medication at bedside.*

_____ _____ 9. Prepare patient as needed for topical application.

_____ _____ 10. Maintain medical asepsis throughout topical application.*

_____ _____ 11. Observe patient before, during and after topical application.

CHECK LIST FOR ROUTINE TOPICAL APPLICATION

ACTIVITIES

U S

_____ _____ 12. Apply topical medication correctly.*

_____ _____ 13. Maintain safety factors for patient during and after task.*

_____ _____ 14. Make patient comfortable after application.*

_____ _____ 15. Clean up patient area after application.

_____ _____ 16. Record and/or report application accurately with observations.*

_____ _____ 17. Recognize limitations in regard to application of topical medication.*

_____ _____ 18. Complete application within proper time span.*

* *

* Must maintain 100% accuracy on these points
Must maintain 75% accuracy on other points (can miss only two (2)).

ALTERED SITUATIONS
FOR
TOPICAL APPLICATION

ACTIVITIES

ALTERED SITUATION # 1

Susan Bateman has been treated for acute poison ivy for 3 days. When the doctor came in today Susan told him her right arm and both legs were itching severely. Dr. Koch ordered Susan's medication to be applied to both legs and her right arm. You are to apply the topical medication according to the new order. Chart what you did.

ALTERED SITUATION # 2

Amos Thompson has a skin irritation on his back und upper legs due to incontinence. When you are ready to apply the topical medication ordered he tells you the area is itching and burning. You note that the entire area is very red and swollen--much more so than yesterday when you applied the medication. What will you do? How will you chart?

ALTERED SITUATION # 3

Albert Larson, a resident at the State Hospital where you work is receiving a topical medication for shoulder pain. This morning when you go to administer the medication he is having severe pain. He says he cannot get up and needs some pain medication. What will you do? What will you chart?

ALTERED SITUATION # 4

Miranda Goodman's decubitus has been treated with a heat lamp and topical medication for two weeks. When you examine her back this morning you find the area is completely healed. What will you do? What will you chart?

INSTRUCTIONS

1. Check with your teacher to make certain you have completed all activities.

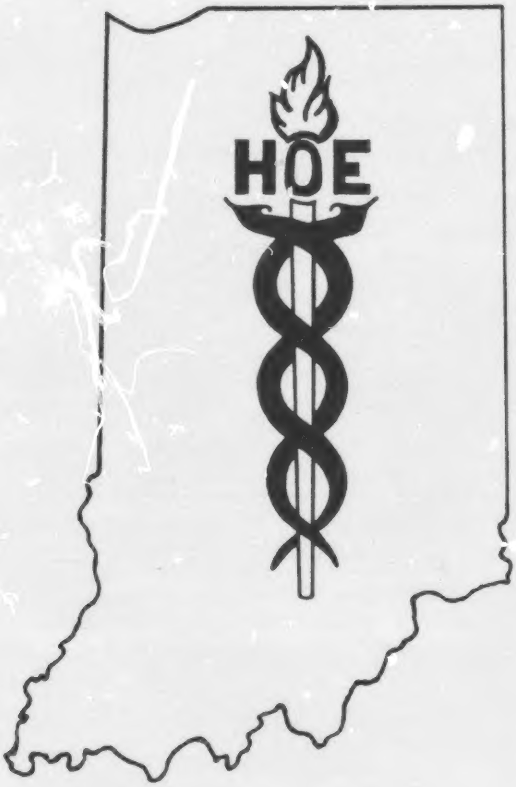
2. If all activities are completed and you feel you have reached the objective tell your teacher you are ready for the "Master Test".

3. If all activities are completed and you do not feel ready to take the "Master Test."

SEE YOUR TEACHER

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

# A - 9 - 27

INSTILLATION OF EYE MEDICATION

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INSTILLATION OF EYE MEDICATION

GOAL

When medications are used in the treatment or diagnosis of eye disorders, there are times when they must be placed on or near the surface of the eye. This process is referred to as "instilling" eye medications. In order for medications to be effective, different forms and types of eye medications may require different methods of instillation. Every health care worker who administers medications must be able to instill eye medications correctly for the patient to have the maximum benefits from those medications.

This module will prepare a health care worker, who administers medications, to instill eye medications correctly for a patient under normal conditions. It will further provide a medications health care worker with basic information and minimum practice in instillation of eye medications when conditions are less than normal.

GO ON TO THE NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

INSTILLATION OF EYE MEDICATION

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study or performance:

1. All areas of study numbered # A-9-1 through # A-9-22.
2. All pre-requisite areas listed for modules # A-9-23 and # A-9-24.
3. Modules # A-9-23 and # A-9-24

* *

If you have completed these areas of study or performance

GO ON TO THE NEXT PAGE

If you have not completed these areas of study or performance

SEE YOUR TEACHER

INSTILLATION OF EYE MEDICATION

Your objective for this task consists of two (2) parts as follows:

OBJECTIVE

1 Given one of two routine situations a student partner (or mannequin) in a school laboratory, access to the proper equipment, simulated eye medication and a "Routine Eye Check List," you will:

   a. assemble the appropriate supplies and/or equipment for the instillation.
   b. instill the eye medication.
   c. record and/or report the eye instillation with observations.
   d. perform the instillation within 15 minutes.
   e. maintain 100% accuracy in all points marked with (*) on the check list.
   f. maintain 75% accuracy in all other points on the check list.

2. Following the successful completion of routine instillation of eye medications you will discuss with your teacher the altered situations. Be able to describe what actions you would take in each of the altered situations.

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services. Vol. 3, pages 180 - 182. (If this text is not available, check the teacher's list for other references.) Read one of the references before going to class.

TEACHER LECTURE:

"Principles of Instilling Eye Medication"

Check the bulletin board for the time(s) of the lecture. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) An outline of the lecture can be found in this module.

TEACHER DEMONSTRATION:

"How to Instill Eye Medication"

Check the bulletin board for the time(s) of the demonstration. If it is given more than once, you may sign up for the time of your choice. You are responsible for knowing the time and location of the correct demonstration. An outline of the demonstration can be found in this module.

LABORATORY ASSIGNMENT:

"Instilling Eye Medication for a Patient"

To help you in your ability to instill eye medications, you will find a specific assignment. Do this assignment only after you have heard the lecture and seen the demonstration (unless you have the teacher's permission to do so.) Check the schedule for your assigned laboratory time and location.

STUDENT PARTNERS:

It is recommended that you practice in the laboratory with a student partner as your patient. Whether a student partner or a mannequin is to be used for the simulated instillation of eye medication, your teacher will give you guidance as to how you are to proceed. If a student partner is used as a patient, it may be necessary to have a second partner observe the check list while you practice. Working together is usually the best way for all to learn.

MASTER TEST

All activities should be completed before taking the "Master Test."

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following points:

1. Recognize any limitations regarding eye medications
   a. other related nursing tasks (i.e., eye dressings, isolated patient, eye irrigation, etc.)
   b. inability to incorporate proper methods (i.e., resistive patient, improper position, etc.)

2. Incorporate overall principles of medication administration
   a. proper storage
   b. medical asepsis
   c. verification of order
   d. 5 rights of medication administration

3. Incorporate principles of eye medication
   a. use only ophthalmic medication
   b. correct form of medication
   c. proper equipment needed
   d. purpose of medication being instilling and general effects and side effects

4. Sequence steps correctly for instillation and needs of patient (see demonstration)

5. Instill medication correctly
   a. correct position of patient for situation
   b. correct instillation for type of medication (i.e., drops or ointment)
   c. incorporate safety factors for patient

LECTURE OUTLINE

ACTIVITIES

6. Record and/or report accurately
    a. medication, dosage, time, method and mode of administration
    b. observations before, during and after instillation

7. Suggestions and precautions for eye medications
    a. human eye extremely sensitive: many people resist instillation - patient comfort is essential
    b. stress factors are common with eye disorders - patient may be emotional - proceed slowly
    c. eye infections are easily contracted - strict asepsis important
    d. watch carefully for adverse effects - common ones include:
        (1) moderate to severe itching
        (2) swelling of eye lids or lining of eye
        (3) visual disturbances (i.e., blurred vision or sensitivity to light)
        (4) feeling of pressure in eye
    e. if medication not "OPHTHALMIC" DO NOT USE; EXCHANGE!

DEMONSTRATION OUTLINE

ACTIVITIES

As you watch the demonstration, be sure to observe the following:

A. Steps In Instilling Liquid Eye Medication

1. Verify the medication order for dosage, mode of administration, time of administration and area of instillation.

2. At the appropriate time proceed to assemble articles for eye instillation.

3. Go to the medication area and unlock it.

4. Wash your hands in adjacent facilities.

5. Obtain the proper eye medication and verify the label with the doctor's orders - make certain it is OPHTHALMIC medication.

6. Place the eye medication on the medicine tray and secure the medication area.

7. Obtain clean cotton balls or tissues, eye dropper if necessary, and place on the medication tray.

8. Take the medication tray with necessary collected items to the patient's assigned unit.

9. Establish the patient's identity.

10. Explain to the patient what you are going to do.

11. Place patient in dorsal recumbent position in bed or sitting position in chair according to desires and/or capabilities.

DEMONSTRATION OUTLINE

ACTIVITIES

A. Cont.

12. Adjust bed to accommodate your height or position patient's chair so you will not be in a strain.
13. Verify medication, dosage, time, method and mode of administration.
14. Draw up medication into eye dropper.
15. Ask patient to look upward.
16. Pull down lower lid of eye in which medication is to be instilled, with hand not holding eye dropper.
17. Introduce the designated dosage of medicine onto the center of the lower extended eyelid - (fornix) without touching the eye dropper on surface of the eye or eyelid.
18. Return the eye dropper to the medication bottle (do not touch on sides of bottle).
19. Ask the patient to close eye gently (or you close for patient).
20. If medication is of a poisonous nature (example, atropine) place your thumb over the inner corner of eye - (canthus) a minute to prevent medication from getting into the tear duct.
21. Gently remove any excess medication from eye with cotton ball or tissue.
22. Make patient comfortable and safe.
23. Return medication and medication tray to proper place, clean and store.
24. Record and/or report instillation of eye medication and any observation made before, during or after task.

DEMONSTRATION OUTLINE

ACTIVITIES

B. Steps In Instilling Ophthalmic Ointments

1-13. Same as steps 1-13 for instilling eye drops.

14. Remove cap from ointment tube, invert upward and lay on table.

15. Ask patient to look upward.

16. Pull down lower lid of eye in which medication is to be instilled, with hand not holding ointment tube.

17. Instill a thin ribbon of ointment along the entire length of the extended lower lid - (fornix) from inner corner - (canthus) to outer corner (canthus).

18. When finished, twist tube with a sideways movement of the wrist to stop flow of ointment.

19. Recap the tube of ointment and lay tube on medicine tray.

20. Ask the patient to close eye gently (or you close for patient).

21. Ask the patient to roll eyeball around to insure entire eyeball is covered with medication.

22-25. Same as steps #21-24 for instilling eye drops.

ACTIVITIES

C. Steps for Handling Contaminated Eye Dropper or Ointment Tube

1. If medicine dropper is contaminated while eye medication being instilled, lay aside immediately (discard or have re-sterilized).
2. Obtain sterile eye dropper, open properly - finish instillation if needed or return to medication bottle.
3. If contaminated eye dropper is accidentally placed into the bottle of medicine - discard the medication and order a fresh supply for the patient.
4. If open end of ointment tube is contaminated - squeeze out additional ointment - scrape or wipe off with sterile tongue blade or gauze sqaure.
5. If cap is accidentally replaced on contaminated ointment tube without doing step #4 above - discard the medication and order a fresh supply for the patient.

D. Steps for Proceeding When There are Related Tasks to Eye Medication

1. If there is a dressing over the eye to be medicated, DO NOT PROCEED unless you are qualified in changing dressings.
2. If you are qualified to change dressing
   a. obtain supplies for eye dressing.
   b. proceed through steps #1-13 for instilling eye drops or ophthalmic ointment.
   c. remove the old dressing in the proper manner.
   d. wash your hands.
   e. proceed with steps
      #14 - 21 for eye drops or
      #14 - 22 for ophthalmic ointment.
   f. replace eye dressing if indicated.
   g. proceed with steps
      #22 - 24 for eye drops or
      #23 - 25 for ophthalmic ointment.

DEMONSTRATION OUTLINE

ACTIVITIES

D. CONT.

3. If you are not qualified to change dressings ask your teacher to perform steps a, c, d, and f, of #2 listed above.

4. If the eye being medicated is to be irrigated before the medication is instilled, DO NOT PROCEED unless you are qualified in irrigating the eye.

5. If you are qualified in eye irrigations
   - a. obtain supplies for eye irrigation.
   - b. proceed through steps #1-13 for instilling eye medication.
   - c. irrigate the eye according to standard procedure.
   - d. proceed with steps
     #14 - 24 for eye drops or
     #14 - 25 for ophthalmic ointment.

6. If you are not qualified in eye irrigations, ask your teacher to perform steps a, and c, of #5 listed above.

7. If there are other tasks related to the instillation of eye medication, consult with your teacher to determine how the situation should be handled.

INSTILLATION OF EYE MEDICATIONS

INSTRUCTIONS

1. During your scheduled laboratory time:
    a. have your partner assist you as a patient or as an observer. (Your teacher will inform you if you are to protect your partner's eye(s) while performing eye instillation or use a mannequin)*
    b. turn to the two (2) routine patient situations in this module
    c. practice both situations using the corresponding Kardex
    d. follow the check list
    e. turn to the two (2) altered patient situations
    f. read and discuss the altered situations with your lab partner
    g. be prepared to describe to your teacher what actions you would take in the altered situations
    h. be sure and keep in mind those factors given in the lecture and demonstration
2. Assist your partner in instillation of eye medication

* If your partner acts as your patient, an additional classmate may be needed to follow the check list

ROUTINE SITUATIONS
FOR
EYE INSTILLATIONS

ACTIVITIES

SITUATION # 1

You are assigned to care for Mrs. Mabel Kirkwood in Room #375. She is a 69-year-old female who has been a patient in the nursing home for three months. She has had Diabetes Mellitus for a number of years. Her health is fairly good, but her eyesight is failing. She is permitted to be up and about as she chooses. You are to instill her eye medication. She is sitting in a chair when you enter the room.

KARDEX

DATE	MEDICATIONS	HOUR			
11/10/80	Lente Insulin U-100 - 45U q.d.	8Am			
11/10/80	Pilocar 2% Ophthalmic Sol.				
	gtts. ii To each eye B.I.D.	8Am		4pm	

DIAGNOSIS: Glaucoma Diabetes Mellitus

DIET: 1200 cal Diabetic

Kirkwood, Mabel

#375

AGE: 69

DR. Stone

ROUTINE SITUATIONS
FOR
EYE INSTILLATIONS

ACTIVITIES

SITUATION # 2

One of your patients is Mr. Paul Johnson in Room #384. After spending the weekend with his family he developed a rash and edema on his face, arms and hands. His right eye is also red and irritated. Dr. Wilson says he probably has poison ivy. You are to administer the eye medication that Dr. Wilson ordered.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Calomine Lotion To rash on				
	face, arms. hands q.i.d.	9	1	5	9
2/1/81	Neo.Cortef Ophthalmic Ointment				
	0.5% To right eye q.i.d.	9	1	5	9

DIAGNOSIS: Acute Dermatitis, eye infecti	DIET: Regular

Johnson, Paul	#384	AGE: 68	DR. Wilson

CHECK LIST
FOR
INSTILLING EYE MEDICATIONS

ACTIVITIES

U	S	
_____	_____	1. Verify order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtain keys for medication area and unlock.
_____	_____	3. Wash hands before proceeding.*
_____	_____	4. Verify label on medication with medication card or Kardex.*
_____	_____	5. Assemble any additional appropriate supplies on medication tray.
_____	_____	6. Identify patient in correct manner.*
_____	_____	7. Explain task to patient.
_____	_____	8. Alter task to meet needs of patient (if applicable).*
_____	_____	9. Prepare patient as needed for eye instillation.
_____	_____	10. Verify medication at bedside.*
_____	_____	11. Maintain medical asepsis during eye instillation.*
_____	_____	12. Observe patient during eye instillation.*
_____	_____	13. Instill eye medication correctly.*
_____	_____	14. Sequence steps of task for best performance.
_____	_____	15. Maintain safety factors for patient.*
_____	_____	16. Make patient comfortable after application.
_____	_____	17. Clean up after eye instillation.
_____	_____	18. Recognize limitations in regard to instillation or related tasks (if applicable).*
_____	_____	19. Record and/or report instillation and observations accurately.*
_____	_____	20. Complete instillation within 15 minutes (if applicable).*

* *

* Must maintain 100% accuracy on these points.
(You may only miss 2 on all other points)

ALTERED SITUATIONS
FOR
EYE INSTILLATION

ACTIVITIES

SITUATION #1

When you go to Mrs. Kirkwood's bedside to administer her eye drops this morning you note that her left eye is very red and irritated. What will you do? What will you chart?

SITUATION #2

When you go to Mr. Johnson's bedside to administer his eye ointment he tells you that Dr. Wilson was just in a half-hour before and said he no longer needed the medication. What will you do? What will you chart?

INSTRUCTIONS

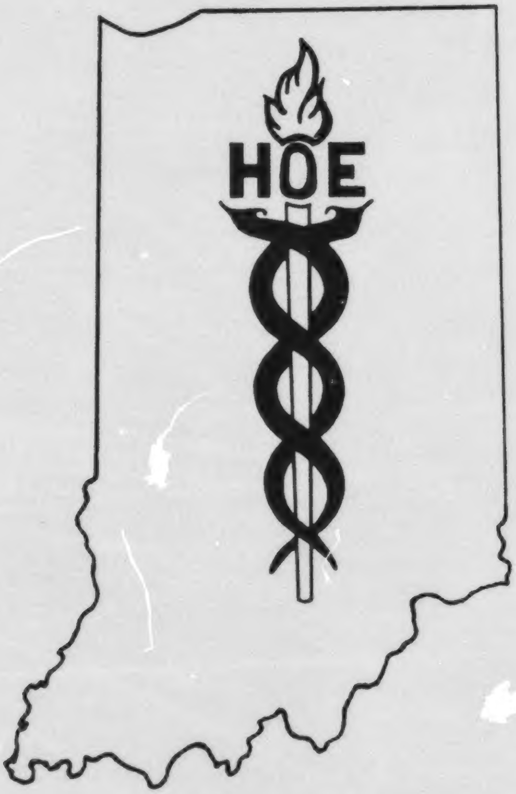
1. Check with your teacher to make certain you have completed all activities.

2. If all acitvities are completed and you feel you have reached the objective, tell your teacher you are ready for the "Master Test."

3. If all activities are completed and you do not feel ready to take the "Master Test", SEE YOUR TEACHER.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

# A - 9 - 28

INSTILLATION OF EAR MEDICATION

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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INSTILLATION OF EAR MEDICATION

GOAL

If a patient is treated by medication for an ear disorder, the medication might be given by injection, orally or placed directly into the external ear canal (ear instillation). The instilling of ear medication is not difficult, but the basic steps and correct placement of the medication are essential to attain the best benefits possible.

This module will provide those health care workers assigned to medications with information and practice so that they are competent to instill ear medication for both adults and children under normal circumstances, either sitting up or lying down.

GO ON TO THE NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.

2. Read through the objective so that you know what you are expected to do upon completing this module.

3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.

4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.

5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

INSTILLATION OF EAR MEDICATION

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study or performances:

1. Structure and Function of the Ear
2. Assist a Patient From Bed to a Chair
3. Assist a Patient From a Chair Back Into Bed
4. All pre-requisite areas listed for Modules # A-9-23
5. Modules # A-9-23 "Preparation of Oral Medications"
6. All pre-requistie areas listed for Module # A-9-24
7. Module # A-9-24 "Administration of Oral Medication"

* *

If you have completed all of these areas of study

GO ON TO THE NEXT PAGE

If you have not completed these areas of study,

SEE YOUR TEACHER

INSTILLATION OF EAR MEDICATION

Your objective for this task consists of two (2) parts as follows:

OBJECTIVE

1. Given one of two routine situations, a student patient (or mannequin) in a school laboratory, access to the proper equipment, simulated ear medication and a proper check list, you will:
    a. assemble the appropriate supplies and/or equipment for two instillations.
    b. instill the ear medication as if for an adult.
    c. record and/or report the ear instillation with observation.
    d. perform the instillation within 20 minutes.
    e. maintain 100% accuracy in all points with * on check list.
    f. maintain at least 75% accuracy in all other points on the check list.

2. Immediately upon successful completion of an ear instillation for an adult, given one of two different routine situations, a student patient (or mannequin) in a school laboratory, the proper equipment, simulated ear medication and a proper check list, you will:
    a. instill the ear medication as if for a child.
    b. record and/or report the ear instillation with observation.
    c. perform the instillation within 15 minutes.
    d. maintain 100% accuracy on all points marked with * on the check list.
    e. maintain at least 75% accuracy in all other points on the check list.

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services, Vol. #3, pages 171 - 172 and page 176. If this text is not available, check the teacher's list for other references. Read one of the references before going to class.

TEACHER LECTURE:

"Principles of Instilling An Ear Medication"

Check the bulletin board for the time(s) of the lecture. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) An outline of the lecture can be found in this module.

TEACHER DEMONSTRATION:

Check the bulletin board for the time(s) of the demonstration. If it is given more than once, you may sign up for the time of your choice. You are responsible for knowing the time and location of the correct demonstration. An outline of the demonstration can be found in this module.

LABORATORY ASSIGNMENT:

"Instilling An Ear Medication"

To help you in your ability to instill an ear medication, you will find a specific assignment. Do this assignment *only after* you have heard the lecture and seen the demonstration (unless you have the teacher's permission to do so). Check the schedule for your assigned laboratory time and location.

STUDENT PARTNERS:

It is necessary that you practice in the laboratory with a student partner (or mannequin) as your patient for the ear instillation. It may be necessary to have a second partner observe the check list while you practice. *Working together is usually the best for all to learn.*

MASTER TEST:

All activities should be completed before taking the "Master Test."

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture on "Principles of Instilling Ear Medication," be sure to note the following:

1. Individual Limitations Regarding Instillation of Ear Medication
   a. level of health worker performing instillation
   b. combination of ear instillation with other tasks (e.g. irrigations, sterile dressings to ear, etc.)

2. Incorporation of Overall Principles of Medication Administration to Ear Instillation
   a. storage of ear medication
   b. medical asepsis and the ear
   c. verification of medication order
   d. five (5) rights of medication administration

3. Specific Principles of Ear Medication
   a. review structure of ear
   b. standard form(s) of ear medication
   c. method of instilling ear medication
      (1) for an adult
      (2) for a child
   d. purposes of ear medication
   e. general effects and side-effects of ear medication

ACTIVITIES

4. Supplies Necessary For Instillation of Ear Medication
    a. patient's chart
    b. Kardex
    c. medication card (if applicable)
    d. keys for medication storage area
    e. medication storage area
    f. medication tray
    g. correct ear medication
    h. cotton balls
    i. tissues
    j. medicine dropper
    k. adjustable light
    l. chair or bed
    m. identification band
    n. patient or mannequin

5. Major Factors In Instilling Ear Medication
    a. position of patient
        (1) sitting up (if possible)
        (2) if unable to sit up - turn on side opposite of instillation
    b. proper lighting
        (1) good adjustable light (e.g. goose neck)
        (2) natural light from window
    c. proper method of instillation
        (1) for an adult
        (2) for a child
    d. proper drainage of ear canal after instillation (cotton ball only holds medication in)

LECTURE OUTLINE

ACTIVITIES

5. (Cont.)
    - e. sequence of steps
        - (1) maintian asepsis
        - (2) conserve energy and supplies
        - (3) remember other tasks that may be combined with instillation (e.g. ear irrigation or sterile dressing)
    - f. remember needs of patient
        - (1) priority of needs (e.g. may be choking, needs to be aspirated, etc.)
        - (2) safety factors
        - (3) patient comfort (e.g. pain, need to eliminate, etc.)

6. Importance of Accurate Records
    - a. medication instillation (which ear, dosage, time, etc.)
    - b. other tasks - irrigation, dressings, etc.
    - c. observations made before, during and after instillation (drainage, discomfort of patient, etc.)

DEMONSTRATION OUTLINE

ACTIVITIES

As you watch the demonstration be sure to observe the following:

A. Steps In Instilling Ear Medication For An Amulatory Adult

1. Verify the order for the medication, dosage, mode of administration, time and site with Kardex or patient's chart.
2. At the appropriate time, proceed to prepare and instill the medication.
3. Obtain keys, go to medication storage area and unlock.
4. Wash hands in adjacent facilities.
5. Obtain ear medication and verify it with doctor's order.
6. Place ear medication on medicine tray and secure medication area.
7. Obtain clean cotton balls and tissues and place on medication tray.
8. Establish patient's identity (by name band or given method for agency).
9. Explain to patient the task you are going to perform.
10. Verify medication, dosage, time, method and mode of administration.

DEMONSTRATION OUTLINE

ACTIVITIES

A. (Cont.)

11. Position patient sitting upright in chair.
12. Adjust light for ear being medicated (or position patient for adequate window light) so that there is good visualization of ear canal.
13. Verify medication, dosage, time and mode of administration for third time.
14. Pinch rubber bulb of medicine dropper and draw up prescribed amount of medication into ear dropper: Release pinch when desired amount obtained.
15. With opposite hand that will be used to instill medication, grasp upper portion of outer ear between index and middle fingers.
16. Straighten the auditory canal by gently pulling outer ear upward and backward and hold in that position.
17. With dominant hand, position tip of ear dropper just slightly into the opening to the ear canal, then point tip upward and toward inner ear canal.
18. Gently and slowly instill prescribed amount of medication into ear canal by pressing on bulb of ear dropper.

ACTIVITIES

A. (Cont.)

19. If more than one dropperful of medication is needed, continue to draw up medication and instill until prescribed amount of medication is given.

20. When finished, return the dropper to the medication bottle.

21. Take a cotton ball and gently place in front of opening to ear canal to keep medicine from escaping. DO NOT pack cotton ball tightly and prevent ear from draining.

22. Take tissue and wipe away any excess medication from surface of outer ear or patient's neck.

23. Make patient comfortable and safe.

24. Clean up patient area.

25. Return medication and medication tray to proper place.

26. Replace medication, clean and store tray.

27. Chart instillation of medication (including type and amount) and all observations made before, during and after instillation.

DEMONSTRATION OUTLINE

ACTIVITIES

B. Steps For Instilling Ear Medication For An Adult In Bed

1-10. Same as steps #1-10 for Instilling Ear Medication For An Ambulatory Adult.

11. If patient is able, roll patient up in bed to a sitting position. If patient is unable to sit up, position patient on opposite side from instillation site. (If unable to turn on appropriate side, clarify with superior, on how to proceed.)

12-27. Same as steps #12-27 for Instilling Ear Medication For an Ambulatory Adult.

C. Steps For Instilling Ear Medication For A Child

1-10. Same as steps #1-10 for Instilling Ear Medication For an Adult.

11. If child can be ambulated, same as step #11 for an Ambulatory Adult. If child restricted to bed, same as step #11 for An Adult in Bed.

12-14. Same as Steps #12-14 Instilling Ear Medication For An Adult.

15. With opposite hand that will be used to instill medication, grasp the ear lobe between the thumb and index finger.

16. Straighten the auditory canal (of the child) by gently pulling the ear lobe down and backward.

17-27. Same as steps #17-27 for Instilling Ear Medication For An Adult.

INSTILLING EAR MEDICATIONS

INSTRUCTIONS

1. During your scheduled laboratory time:
   a. Have your partner be your patient or use a mannequin as directed by your teacher. (If your partner is to be your patient, your teacher will give you special instructions for protection of your partner.)

   b. Practice both of the adult patient situations. Use the corresponding Kardex cards for each situation.

   c. Follow the performance check list.

   d. Practice both of the child patient situations. Use the corresponding Kardex cards for each situation.

   e. Follow the performance check list.*

   f. Have a second person observe you during your performance, if necessary.

   g. Be sure to keep in mind those principles, factors and methods given in the lecture and demonstration.

2. Be a patient for your partner and, if necessary, observe others instilling ear medication.

* At the time of testing, you will draw for a situation for an adult and for a child. Secure supplies for both situations. Upon successful completion of one, you will immediately proceed to the other.

525

ADULT SITUATIONS
FOR
EAR INSTILLATION

ACTIVITIES

SITUATION # 1

Mr. John Larson is a 67-year-old male patient in Room #272 of the nursing home in which you work. He is usually up and about and cares for himself. However, two weeks ago he stated he had a severe upper respiratory infection. Three days ago he stated he had an earache. The earache became worse and for the past 24 hours he had been in bed all the time; he complains of severe pain in his ear, nausea and feeling chilled. He has an elevated temperature and the doctor has ordered new medications. You have been asked to instill the first dose of ear medication to relieve the pain he is having.

KARDEX

<table>
<tr><th>DATE</th><th>MEDICATIONS</th><th colspan="4">HOUR</th></tr>
<tr><td>2/1/81</td><td>Compazine 25 Mg. Suppository</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>q.12 h. x 2 doses (8Am - 8pm)</td><td>8</td><td></td><td>8</td><td></td></tr>
<tr><td>2/1/81</td><td>Terramycin 250 Mg. Cap T q.6 h.</td><td>8</td><td>2</td><td>8</td><td>2</td></tr>
<tr><td></td><td>x 28 doses</td><td></td><td></td><td></td><td></td></tr>
<tr><td>2/1/81</td><td>Americaine Otic - 4-5 drops</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>(warm) in Left ear q.4h. p.r.n.</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>for pain</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">DIAGNOSIS: Acute Otitis Media - Left</td><td colspan="4">DIET: Regular</td></tr>
<tr><td>Larson, John</td><td># 227   AGE: 67</td><td colspan="4">DR. Berry</td></tr>
</table>

Module #A-9-28

ADULT SITUATIONS
FOR
EAR INSTILLATION

ACTIVITIES

SITUATION # 2

Miranda Thompson, age 88, has complained of difficulty in hearing. Dr. James examined her ears and said they were impacted with wax (cerumen). He ordered ear drops to be instilled for two days to be followed on the third day by ear irrigations. You are to instill the eardrops as ordered.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Auralgan ear solution – fill				
	both ear canals T.i.d. x 2 days				
	2/1/81 9 Am. 1 pm. 5 pm	9	1	5	
	2/2/81 9 Am 1 pm 5 pm				
	Irrigate both ears c̄ warm				
	water 2/3/81 9 Am.				

DIAGNOSIS: Arthritis, Impacted ears			DIET: Regular
Thompson, Miranda	# 444	AGE: 88	DR. James

CHECK LIST
FOR
INSTILLING EAR MEDICATION

ACTIVITIES

U	S	
_____	_____	1. Verify order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtain keys for medication area and unlock.
_____	_____	3. Wash hands before proceeding.*
_____	_____	4. Verify label on medication (or container) with medication card or Kardex and place medication on tray.*
_____	_____	5. Assemble any additional appropriate supplies on medication tray.
_____	_____	6. Identify patient in correct manner.*
_____	_____	7. Explain task to patient.
_____	_____	8. Prepare patient as needed for ear instillation.
_____	_____	9. Position patient correctly for instillation.*
_____	_____	10. Provide adequate lighting for ear instillation.*
_____	_____	11. Verify medication at bedside.*
_____	_____	12. Maintain medical asepsis during ear instillation.*

Module #A-9-28

CHECK LIST FOR INSTILLING EAR MEDICATION

ACTIVITIES

U S

_____ _____ 13. Straighten ear canal correctly for age level of patient.*

_____ _____ 14. Instill ear medication correctly.*

_____ _____ 15. Provide for proper drainage of ear canal following instillation.*

_____ _____ 16. Observe patient throughout ear instillation.*

_____ _____ 17. Maintain safety factors for patient.*

_____ _____ 18. Make patient comfortable after instillation.

_____ _____ 19. Clean up after ear instillation.

_____ _____ 20. Sequence steps of task correctly.

_____ _____ 21. Recognize limitations in regard to instillation

_____ _____ 22. Record and/or report instillation and observations accurately.*

_____ _____ 20. Complete instillation within specified time *

* *

You must maintain 100% accuracy on points marked with an * .

You may only miss 2 of all other points to maintain at least 75% accuracy.

CHILD SITUATIONS
FOR
EAR INSTILLATION

ACTIVITIES

SITUATION # 1

You are working as a Medication Aide in a home for retarded children. Sally Powers, age 4, has had a continuing problem with ear wax accumulation. Dr. Barnes ordered sweet oil drops to be instilled daily for five days. She will return on the sixth day to examine Sally's ears again. You are to instill the medication as ordered.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Sweet oil – fill both				
	ear canals daily x 5 days	9			
	(1st dose 9Am 2/1/81, last				
	dose 9Am 2/5/81)				
DIAGNOSIS: Impacted ears		DIET: Reg. Pediatric			
Powers, Sally	# 676	AGE: 4	DR. Barnes		

CHILD SITUATIONS
FOR
EAR INSTILLATION

ACTIVITIES

SITUATION # 2

One of your patients is Johnnie Shaw who is 6 years old. He has development an ear inflammation. The doctor has ordered medication to be instilled in both ears. You are to instill the medication as ordered.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	OTOCORT ear drops - instill				
	4-5 drops in each ear b.i.d.				
	X five days (8Am + 8 pm)	8			8
	(1st dose 8 am. 2/1/81,				
	last dose 8 pm 2/5/81				

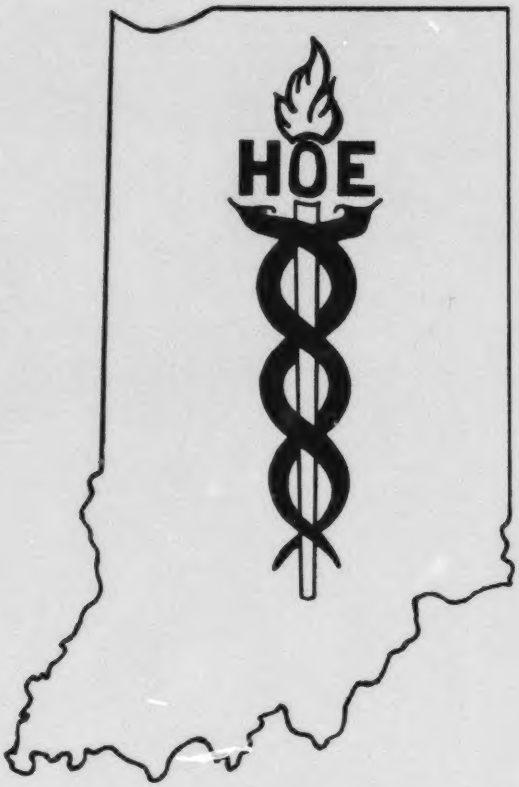
DIAGNOSIS: Severe Tympanitis, R + L			DIET: Reg. Pediatric
Shaw, Johnnie	#653	AGE: 6	DR. Barnes

INSTRUCTIONS

1. Check with your teacher to make certain you have completed all activities.
2. If all acitvities are completed and you feel you have reached the objective, tell your teacher you are ready for the "Master Test."
3. If all activities are completed and you do not feel ready to take the "Master Test", SEE YOUR TEACHER.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

# A - 9 - 29

INSTILLATION OF NASAL MEDICATION

WRITTEN BY: PHYLLIS BILGER, PROJECT RESEARCHER

REVISED BY: SARA W. MORRIS, R.N., B.S.N.

FUNDED BY: INDIANA STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION

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INSTILLATION OF NASAL MEDICATION

GOAL

Treatment of a disorder of the nose or sinus cavities is frequently done by medication. Although the medication could be administered by injection or orally it is often placed directly on the surface of the nasal passageway (nasal instillation) and allowed to penetrate to the area where it is needed. The basic methods used to instill the medication are not difficult to learn but are necessary to know so that the patient can attain the proper benefits from the medication.

This module will enable the health care worker administering medications to develop job entry level skill in the instillation of both front and back nasal medications for routine patient circumstances.

GO ON TO THE NEXT PAGE

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USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

INSTILLATION OF NASAL MEDICATION

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study or performance:

1. Structure and Function of the Nose
2. Position A Patient in Bed For Examination or Treatment
3. All pre-requisite areas listed for Modules # A-9-23
4. Modules # A-9-23 "Preparation of Oral Medications"
5. All pre-requistie areas listed for Module # A-9-24
6. Module # A-9-24 "Administration of Oral Medication"

* *

If you have completed these areas of study

GO ON TO THE NEXT PAGE

If you have not completed these areas of study

SEE YOUR TEACHER

INSTILLATION OF NASAL MEDICATION

Your objective for this task consists of two (2) parts as follows:

OBJECTIVE

1. Given one of two routine situations, a student patient (or mannequin) in a school laboratory, access to the proper equipment, simulated nasal medication and a proper check list, you will:
    a. assemble the appropriate supplies and/or equipment for two instillations: one by dropper, one by inhaler or atomizer.
    b. instill the nasal medication by medicine dropper.
    c. record and/or report the nasal instillation with observation.
    d. perform the instillation within 20 minutes.
    e. maintain 100% accuracy in all points marked with * on the check list.
    f. maintain at least 75% accuracy in all other points on the check list.

2. Immediately upon successful completion of a routine nasal instillation by dropper, given one of two different routine situations, a student patient (or mannequin) in a school laboratory, the proper equipment, simulated nasal medication and a proper check list, you will:
    a. instill the nasal medication by inhaler or atomizer.
    b. record and/or report the nasal instillation with observations.
    c. perform the instillation within 15 minutes.
    d. maintain 100% accuracy on all points marked with * on the check list.
    e. maintain at least 75% accuracy in all other points on the check list.

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services, Vol. #3, pages 182 - 183 and page 185 - 187. If this text is not available, check the teacher's list for other references and read one of them before going to class.

TEACHER LECTURE:

"Principles of Instilling Nasal Medication."
Check the bulletin board for the time(s) of the lecture. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) An outline of the lecture can be found in this module.

TEACHER DEMONSTRATION:

Check the bulletin board for the time(s) of the demonstration. If it is given more than once, you may sign up for the time of your choice. You are responsible for knowing the time and location of the correct demonstration. An outline of the demonstration is included in this module.

LABORATORY ASSIGNMENT:

"Instilling Nasal Medication"
To help you in your ability to instill nasal medication, you will find a specific assignment. Do this assignment only after you have heard the lecture and seen the demonstration (unless you have the teacher's permission to do so). Check the schedule for your assigned laboratory time and location.

STUDENT PARTNERS:

It is necessary that you practice in the laboratory with a student partner (or mannequin) as your patient for the nasal instillation. It may be necessary to have a second partner observe the check list while you practice. Working together is usually the best way for all to learn.

MASTER TEST:

All activities should be completed before taking the "Master Test."

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture on "Princples of Instilling Nasal Medication," be sure to note the following:

1. Individual Limitations Regarding Instillation of Nasal Medications
    a. level of health worker performing instillation
    b. combination of nasal instillation with other tasks (e.g. irrigation, sterile dressings or packing of nose, etc.)
2. Incorporation of Overall Principles of Medication Administration to Nasal Instillation
    a. storage of nasal medication
    b. medical asepsis and the nose
    c. verification of medication order
    d. five (5) rights of medication administration
3. Specific Principles of Nasal Medication
    a. review structure of nose
    b. standard forms of nasal medication
        (1) drops
        (2) inhaler
        (3) atomizer
    c. methods of instilling nasal medication
        (1) for nasal passageway and front sinus
        (2) for back sinus
    d. purposes of nasal medication
    e. general effects and side-effects of nasal medication
4. Supplies Necessary For Instillation of Nasal Medication
    a. patient's chart
    b. Kardex
    c. medication card (if applicable)
    d. keys for medication storage area
    e. medication storage area
    f. medication tray
    g. correct nasal medication

LECTURE OUTLINE

ACTIVITIES

4. (Cont.)
    h. tissues or hand towel
    i. medicine dropper, inhaler and atomizer
    j. patient's bed
    k. pillow
    l. identification band
    m. patient or mannequin
5. Major Factors In Instilling Nasal Medication
    a. position of patient
        (1) lying flat on back
        (2) pillow under shoulder
        (3) head position correct
            (a) nasal passageway and front sinus
            (b) sinus at back of nose
    b. proper method of instillation
        (1) by dropper
        (2) by inhaler
        (3) by atomizer
    c. proper length of time for penetration of medication
    d. sequence of steps
        (1) maintain asepsis in reference to nose
        (2) conserve energy and supplies
        (3) remember other tasks that may be combined with instillation (e.g. nasal irrigation or nasal packing)
    e. remember needs of patient
        (1) priority of needs (e.g. may be choking, needs to be aspirated, may be bleeding, etc.)
        (2) safety factors (protect from injury)
        (3) patient comfort (e.g. pain, need to eliminate, etc.)
6. Importance of Accurate Records
    a. medication instillation (which nostril, dosage, time, etc.)
    b. other tasks (irrigation, packing, etc.)
    c. observations made before, during and after instillation (drainage, discomfort, of patient, etc.)

DEMONSTRATION OUTLINE

ACTIVITIES

As you watch the demonstration be sure to observe the following:

A. Steps For Instilling Nasal Medication By Dropper For A Patient's Back Sinus

1. Verify the order for the medication, dosage, mode of administration, time and site with Kardex or patient's chart.
2. At the appropriate time proceed to prepare and instill the medication.
3. Obtain keys, go to medication storage area and unlock.
4. Wash hands in adjacent facilities.
5. Obtain nasal medication from storage area and verify label with doctor's orders.
6. Place nasal medication on medicine tray and secure medication storage area.
7. Obtain tissues or hand towel and place on medicine tray.
8. Take medication tray, with nasal medication and supplies to patient's assigned unit.
9. Establish patient's identity (by name band or given method for agency).
10. Explain to patient the task you are going to perform.
11. Place patient in dorsal recumbent position (flat on back).
12. Place pillow under shoulders so that patient's head drops backward (or have patient move to edge of bed so that head drops backward).
13. Verify medication, dosage, time, method and mode of administration.
14. Place or have patient place head in upward position so that the patient is looking at the ceiling.
15. Pinch the rubber bulb of the medicine dropper and draw up the prescribed amount of medication into nose dropper.

DEMONSTRATION OUTLINE

ACTIVITIES

A. (Cont.)

16. Steady or support the patient's head, if necessary, with hand that will not be used to instill medication.
17. With dominant hand, hold medicine dropper slightly above indicated nostril at approximately a 75° angle, making certain that the tip of the dropper is directed toward the middle portion of the upper nose. DO NOT touch the nasal surface with the dropper.
18. Gently and slowly place prescribed amount of medication into nostril by pressing on bulb of dropper.
19. Withdraw the medicine dropper (if more medication is needed continue steps 15 - 19 until prescribed amount is given).
20. Squeeze out any unused medication left in the dropper into a designated container or tissue.
21. Return the dropper to the medication bottle and secure it.
22. Take a tissue or handtowel and dry the patient's nose.
23. Re-position the patient to make comfortable and safe, but leave flat 5 - 10 minutes.
24. Clean up patient area.
25. Return medication and medication tray to proper place.
26. Replace medication, clean and store tray.
27. Chart instillation of medication (including type, amount and area medicated) and all observations made before, during and after instillation.
28. Return to patient's unit and assist or place patient in desired or required position.

B. Steps For Instilling Nasal Medication By Dropper For A Patient's Nasal Passageway or Frontal Sinus

1-13. Same as steps #1-13 for Instilling Medication by Dropper for Back Sinus

DEMONSTRATION OUTLINE

ACTIVITIES

B. (Cont.)

14. Place or have patient turn head sideways so that nostril to be instilled will be facing that direction (example: left nostril being medicated - head should be turned to left.) If both nostrils are to be medication, change head position as indicated.

15-28. Same as steps #15-28 for Instilling Medication by Dropper for Back Sinus.

C. Steps For Instilling Nasal Medication By Inhaler For A Patient

1-10. Same as steps #1-10 for Instilling Back Sinus and Nasal Passageway or Frontal Sinus.

11. Place patient in sitting position.

12. Verify medication, dosage, time and mode of administration.

13. Place head in indicated position for
    a. back sinus (see A. #14).
    b. nasal passageway on frontal sinus (see B. #14).

14. Insert the inhaler or atomizer into designated nostril and gently close the other nostril by pressing it toward the center bone.

15. For an inhaler, just hold in position. For an atomizer, hold in position and compress it at least twice (unless otherwise ordered).

16. Ask the patient to take several deep breaths through the open nostril, with mouth open.

17. If indicated, medicate opposite nostril (for nasal passageway or frontal sinus, change head position) and replace cap.

18-24. Same as steps #22-28 for Instilling Nasal Medication by Dropper.

INSTILLATION OF NASAL MEDICATION

INSTRUCTIONS

1. During your scheduled laboratory time:

   a. Have your partner be your patient or use a mannequin as directed by your teacher (if your partner is to be your patient, your teacher will give you special instructions for protection of your partner).

   b. Practice both of the patient situations for using a dropper included on the following pages. Use the corresponding Kardex cards for each situation.

   c. Follow the performance check list found in this module.

   d. Practice both of the patient situations for using an inhaler and atomizer included in this module. Use the corresponding Kardex cards for each situation.

   e. Follow the performance check list included herein.*

   f. Have a second person observe you during your performance, if necessary.

   g. Be sure to keep in mind those principles, factors and methods given in the lecture and demonstration.

2. Be a patient for your partner and, if necessary, observe others instilling nasal medication.

* At the time of testing you will draw for a situation for nasal medication by dropper and one by inhaler or atomizer. You will secure supplies for each. Upon succesful completion of one, you will immediately proceed to the second one.

SITUATIONS
FOR
NASAL INSTILLATION - DROPPER

ACTIVITIES

SITUATION # 1

Mr. Ted Brewer, a 75-year-old male, is patient in Room #806. He is being treated for an acute attack of hay fever. He is suffering from a very irritated and congested nose. In addition to the medication for his hay fever, the doctor has also ordered nose drops to help decrease the secretion. You are to instill the nose drops the doctor has ordered (medicate the patient for a nasal passageway instillation).

KARDEX

DATE	MEDICATIONS	HOUR			
9/1/81	Afrin Nose Drops gtts. iii in				
	each nostril b.i.d. 9 am-9 pm	9			9
	(medicate for nasal passageway)				

DIAGNOSIS: Hayfever c̄ Rhinitis			DIET: Regular
Brewer, Ted	#806	AGE: 75	DR. Sloan

SITUATIONS
FOR
NASAL INSTILLATION - DROPPER

ACTIVITIES

SITUATION # 2

Sue Clawson is a 72-year-old female patient in Room #545 of the intermediate care unit of the nursing home where you work. She has been treated for several days for an acute upper respiratory infection. After examining her this morning, the doctor states that she has also developed a severe inflammation in her posterior sinus. He ordered the medication to relieve her sinusitis and it has just come from the pharmacy. The head nurse has asked you to instill the medication now to relieve Ms. Clawson's nasal congestion.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Privine Hcl. Nasal Sol. 0.05%				
	gtts. ii in each nostril				
	q.4 h. p.r.n. for congestion				
	(medicate for posterior sinus)				

DIAGNOSIS: U.R.I c̄ Post. sinusitis			DIET: Regular
Clawson, Sue	# 545	AGE: 72	DR. Francis

CHECK LIST
FOR
INSTILLING NASAL MEDICATION

ACTIVITIES

U	S	
_____	_____	1. Verify order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtain keys for medication area (if applicable).
_____	_____	3. Wash hands before proceeding.*
_____	_____	4. Verify label on medication card or Kardex. Place medication on medicine tray.*
_____	_____	5. Assemble any additional appropriate supplies on medication tray (if applicable).
_____	_____	6. Identify patient in correct manner.*
_____	_____	7. Explain task to patient.
_____	_____	8. Prepare patient, as needed, for nasal instillation.
_____	_____	9. Position patient correctly for instillation.*
_____	_____	10. Position patient's head properly for instillation.
_____	_____	11. Verify medication at bedside.*
_____	_____	12. Maintain medical asepsis during nasal instillation.
_____	_____	13. Use proper equipment for nasal medication ordered.*

CHECK LIST
FOR
INSTILLING NASAL MEDICATION

ACTIVITIES

U	S	
_____	_____	14. Instill nasal medication correctly.*
_____	_____	15. Provide for proper penetration of nasal medication following instillation.*
_____	_____	16. Observe patient throughout nasal instillation.*
_____	_____	17. Maintain safety factors for patient.*
_____	_____	18. Make patient comfortable after instillation.
_____	_____	19. Clean up after nasal instillation.
_____	_____	20. Sequence steps of task correctly.
_____	_____	21. Recognize limitations in regard to instillation.*
_____	_____	22. Record and/or report instillation and observations accurately.*
_____	_____	23. Complete instillation within time span.*

* *

Must Maintain 100% accuracy on points marked with an *.

You can only miss two of all other points to maintain at least 75% accuracy.

SITUATIONS
FOR
NASAL INSTILLATION - INHALER & ATOMIZER

ACTIVITIES

SIUTATIONS # 1

Mrs. Beth Green is a 30-year-old female patient on the floor where you work. She has been bothered with hay fever for several weeks. Due to all of the nasal congestion she has had, she has developed a middle earblock in her right ear. In addition to other medications the doctor has ordered a medication to be given by nasal inhalation to help relieve the ear block. The medication has just arrived from the pharmacy and you are to administer it now.

KARDEX

DATE	MEDICATIONS	HOUR			
9/1/81	Benzedrex Inhaler - administer				
	To Right nostril q.4 h. p.r.n.				
	for pressure in R. ear				
	(Medicate for posterior sinus)				

DIAGNOSIS: Cerebral Palsy Hay fever c̄ R. ear block			DIET: Reg.
Green, Beth	# 116	AGE: 30	DR. Norris

SITUATIONS
FOR
NASAL INSTILLATION - INHALER & ATOMIZER

ACTIVITIES

SITUATION # 2

Mr. John Harris is a 76-year-old male in Room #235 of the nursing home where you work. He is in fairly good health, but does suffer from nasal allergies and inflammation of his front sinus from time to time. Mr. Harris asks you for medication for his nose and sinus before he goes to bed. You are to instill his nasal medication as ordered.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Neo-Synephrine 0.5% nasal				
	spray - spray each nostril				
	q.4h. p.r.n. for nasal congestion				
	(medicate for nasal passageway)				

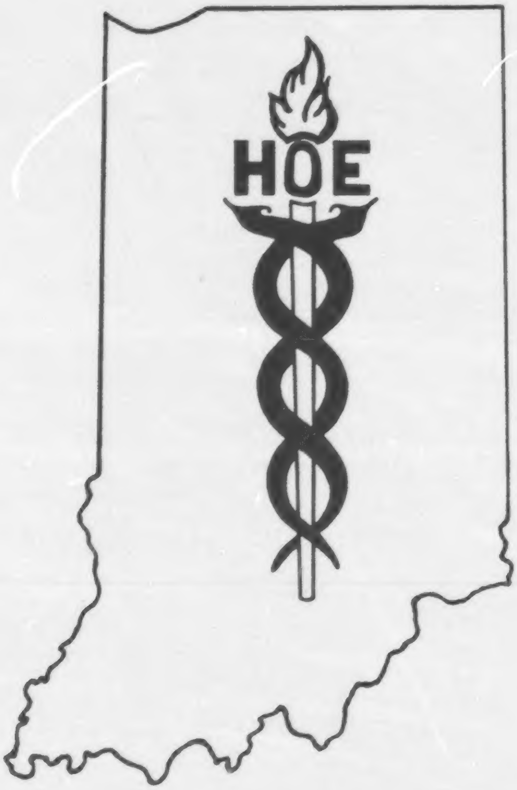
DIAGNOSIS: Allergic rhinitis; Sinusitis
DIET: Regular
Harris, John
235
AGE: 76
DR. Davis

INSTRUCTIONS

1. Check with your teacher to make certain you have completed all activities.
2. If all acitvities are completed and you feel you have reached the objective, tell your teacher you are ready for the "Master Test."
3. If all activities are completed and you do not feel ready to take the "Master Test", SEE YOUR TEACHER.

INDIANA HEALTH OCCUPATIONS EDUCATION

GRANT # 16-76T-D-2



MODULE

# A - 9 - 30

INSERTION OF VAGINAL OR RECTAL MEDICATION

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INSERTION OF VAGINAL OR RECTAL MEDICATION

GOAL

It has been established in previous areas of study and/or performances that there are a variety of forms of medication and methods of administration; each serves a specific purpose or function. The most common forms of medication are solids and liquids, and the most common methods of administration are oral or by injection. There are times, however, when a semi-solid material which melts readily at body temperature is placed (inserted) into a body cavity. The melting releases the medication and the medication can be used by the local area or absorbed and taken where needed.

Medications that are inserted into body cavities and melt at body temperature are called suppositories. The vaginal cavity and the rectal cavity are the two main areas where suppositories are inserted. The method of insertion for each is quite similar but there are some differences.

This module will enable the health worker adminiserting medications to competently, at job entry level, insert both vaginal and rectal suppositories for patients under routine patient circumstances.

GO ON TO THE NEXT PAGE

USE OF THE LEARNING MODULE

INSTRUCTIONS

1. Check the list of pre-requisites for this module on the next page to make certain you are ready for this module.
2. Read through the objective so that you know what you are expected to do upon completing this module.
3. If you think you are capable of reaching the objective without going through the module, tell the teacher you wish to take the Master Test.
4. If you take the Master Test, instructions will be given to you when you finish, as to how to proceed.
5. If you do not wish to take the Master Test, turn to the list of activities. Take a few moments to read through each activity listed. Be sure to ask your teacher to explain any activity you do not understand.

GO ON TO THE NEXT PAGE

INSERTION OF VAGINAL OR RECTAL MEDICATION

PRE-REQUISITES

In order to understand and successfully complete this module, you should have completed the following areas of study or performance:

1. Position A Patient For Examination and/or Treatment
2. Drape A Patient For A Necessary Task
3. Assist A Patient With Body Eliminations
4. Glove Aseptically For Specific Procedures
5. All areas of study numbered # A-9-1 through # A-9-22
6. All pre-requisite areas listed for modules # A-9-23 and # A-9-24
7. Module #A-9-23 and #A-9-24

* *

If you have completed these areas of study or performance

GO ON TO THE NEXT PAGE

If you have not completed these areas of study or performance

SEE YOUR TEACHER

555

INSERTION OF VAGINAL OR RECTAL MEDICATION

Your objective for this task consists of three (3) parts as follows:

OBJECTIVE

1. Given one of two relevant situations, a student patient (or mannequin) in a school laboratory, access to the proper equipment, simulated suppository medication and a check list on inserting medication, you will:
   a. assemble the necessary supplies and/or equipment for two insertions, one vaginal and one rectal.
   b. insert a vaginal suppository or vaginal cream.
   c. record and/or report the vaginal insertion with observations.
   d. perform the insertion within 20 minutes.
   e. maintain 100% accuracy in all points with of the check list marked with *.
   f. maintain at least 75% accuracy in all other points of the check list.
2. Immediately upon successful completion of a vaginal medication insertion, given one of two different relevant situations, a student partner (or mannequin) in a school laboratory, access to the proper equipment, simulated suppository medication and a check list on inserting suppository medication, you will:
   a. insert a rectal suppository.
   b. record and/or report the rectal insertion with observations.
   c. perform the insertion within 15 minutes.
   d. maintain 100% accuracy on all points of the check list marked with *.
   e. maintain at least 75% accuracy in all other points on the check list.

STUDENT ACTIVITIES

INSTRUCTIONS

PREFERRED TEXT:

Nursing Skills for the Allied Health Services, Vol. #2, pages 446-449. If this text is not available, check the teacher's list for other references and read one of them before going to class.

TEACHER LECTURE:

"Principles of Inserting Vaginal and Rectal Medications." Check the bulletin board for the time(s) of the lecture. If it is given more than once, you may sign up for the time of your choice. (You are responsible for knowing the time and location.) An outline of the lecture can be found in this module.

TEACHER DEMONSTRATION:

"How to Insert A Vaginal and Rectal Medication" Check the bulletin board for the time(s) of the demonstration. If it is given more than once, you may sign up for the time of your choice. You are responsible for knowing the time and location of the correct demonstration. An outline of the demonstration can be found in this module.

LABORATORY ASSIGNMENT:

"Inserting Vaginal and Rectal Medication For A Patient" To help you in your ability to instill vaginal and rectal suppositories you will find a specific assignment. Do this assignment only after you have heard the lecture and seen the demonstration (unless you have the teacher's permission to do so). Check the schedule for your assigned laboratory time and location.

STUDENT PARTNERS:

It is recommended that you practice in the laboratory with a student partner as your patient. Whether a student partner or a mannequin is to be used for the simulated insertion of a medication, your teacher will give you guidance as to how you are to proceed. If a student partner is used as a patient, it may be necessary to have a second partner observe the check list while you practice. Working together is usually the best way for all to learn.

MASTER TEST:

All activities should be completed before taking the "Master Test." Instructions for it are found on page 1 of the Master Test.

LECTURE OUTLINE

ACTIVITIES

As you listen to the lecture, be sure to note the following points:

1. Recognize Limitations In Regard To Insertion of Medications (No health worker should attempt to do a procedure he/she has not been taught to do.)

2. Incorporate General Medication Principles
   a. proper storage for medication
   b. medical asepsis for entire task
   c. verification of order
   d. five (5) rights of medication administration

3. Utilize Principles of Rectal and Vaginal Medication
   a. standard form of medication
   b. proper supplies and/or equipment needed for insertion
   c. areas of insertion of suppository or cream
   d. purpose(s) of rectal and vaginal medication
   e. general effects and side-effects of rectal and vaginal medication

4. Sequence Steps of Insertion Correctly
   a. according to body cavity
   b. according to patient's needs

5. Incorporate Major Factors of Insertion
   a. privacy and safety for the patient
   b. position of patient of situation
   c. draping for situation
   d. steps of insertion for situation

LECTURE OUTLINE

ACTIVITIES

6. Record and/or Report Accurately
    a. medication inserted
    b. time, dosage and area of medication insertion
    c. observations before, during and after insertion

7. Utilize Suggestions and Precautions As Needed
    a. follow agency rules regarding exchange or obtaining medication

    b. regarding supplies
        (1) gloves need not be sterile unless instructed by superior
        (2) lubricant should be "water soluble"
        (3) suppositories melt at body temperature (careful handling by health worker necessary)

    c. regarding insertion
        (1) consider sensitivity of patient
            (a) modesty level
            (b) comprehension level
            (c) pain level
        (2) consider results of insertion and be prepared
        (3) DO NOT MISUSE suppositories consistently for patient elimination

DEMONSTRATION OUTLINE

ACTIVITIES

As you watch the demonstration, be sure to observe the following:

A. Steps For Inserting A Vaginal Suppository

1. Check the patient's chart for doctor's order sheet for verification of the medication dosage, mode of administration, time of administration, and area of administration.
2. At the appropriate time, proceed to prepare and insert the suppository.
3. Obtain keys, go to medication storage area and unlock medication area.
4. Wash hands in adjacent facilities.
5. Obtain suppository container and verify it with doctor's order.
6. Take suppository from container (unit-dose or quantity container) according to prescribed method.
7. For unit-dose, place suppository on medicine tray. Place untouched suppository in paper container or on paper towel then place on medicine tray.
8. Go to area where supplies are stored and obtain an examination glove, appropriate lubricant, a chux or bed protector and paper towel. Place all items on medicine tray.
9. Take medicine tray with supplies and medication to patient's assigned unit.
10. Establish patient's identity (by name band or given method for agency).
11. Explain to patient the task you are going to perform.
12. Obtain bath blanket (for drape) and toilet tissue, screen patient and adjust bed for your height.
13. Verify medication, dosage, time, method of administration and area of insertion.

DEMONSTRATION OUTLINE

ACTIVITIES

A. (Cont.)

14. Cover patient with bath blanket and fan fold top covers to bottom of bed.
15. Lower bed rail and place patient in Dorsal Recumbent Position.
16. Drape patient as for vaginal examination (diamond pattern).
17. Place chux or bed protector under patient's buttocks.
18. For Unit-Dose tear perforated end off wrapper and return suppository to medicine tray.
19. Remove cap from lubricant (or tear open individual package) and squeeze small amount onto paper towel on medicine tray.
20. Take examination glove from wrapper and put on hand used to insert suppository.
21. For Unit-Dose pick up suppository in ungloved hand and squeeze closed end of wrapper, forcing suppository into gloved hand. Suppository from quantity container should be picked up directly with gloved hand.
22. Hold base of suppository with gloved hand between thumb, index and middle fingers with tip exposed approximately one-half inch.
23. Pass exposed tip of suppository through lubricant on paper towel.
24. With ungloved hand, lift point of drape between legs exposing only enough of the patient to visualize the vaginal area.
25. Holding the suppository between the thumb, index and middle fingers, gently insert it into the vaginal opening. (Ask patient to take deep breath while inserting suppository.)
26. Using index finger, gently push the suppository upward into the vagina so that the entire suppository is past the vaginal opening (approximately 1½ - 2 inches). Use extreme caution for a very small person or a person who has a vaginal swelling.

DEMONSTRATION OUTLINE

ACTIVITIES

A. (Cont.)

27. When certain the suppository is in place, gently withdraw the insertion finger.
28. Hold, or ask patient to hold legs together for a few minutes to keep suppository from slipping out.
29. Ask patient, or continue, to hold legs together until urge to expel the suppository is gone.
30. Remove examination glove by holding cuff and turning inside out. Wrap glove in paper towel.
31. Remove chux or bed protector and return patient to desired or required position.
32. Replace top covers and remove drape.
33. Make patient comfortable and safe.
34. Clean up patient's unit, dispose of waste materials in proper place.
35. Return medicine tray and lubricant to proper place, clean and store.
36. Record and/or report insertion of suppository, time and area inserted and any pertinent observations made before, during or after insertion.

B. Steps For Inserting A Rectal Suppository

1-14. Same as steps #1-14 for inserting vaginal suppository.

15. Lower bed rail and place patient in Sim's position.

16. Drape bath blanket loosely over hip area to allow for space when inserting suppository.

17-23. Same as steps #17-23 for inserting vaginal suppository.

24. With ungloved hand, lift drape over buttocks, exposing only enough of the patient to visualize the anal region.

25. With ungloved hand, raise the upper buttock upward and toward the patient's head and hold it there.

DEMONSTRATION OUTLINE

ACTIVITIES

B. (Cont.)

26. Holding the suppository between the thumb, index and middle finger, carefully insert it into the anal sphincter. (Ask the patient to take a deep breath as you insert the suppository.)
27. Using index finger, gently push the suppository upward so that it passes through the anal sphincter into the rectum about 2½ - 3 inches (for a small person or rectal problems use little finger).
28. When certain the suppository is in place, gently withdraw the insertion finger. (If feces felt, be sure suppository is along wall of the rectum.)
29. Hold buttocks together for a few seconds and ask patient to breathe deeply until urge to expel the suppository is gone.
30. Remove examination glove by holding cuff and turning inside out. Wrap glove in paper towel.
31. If suppository given was for elmination
    a. get out bed pan and place it and tissue under covers close to patient.
    b. instruct patient to try to withhold bowel movement at least 10 minutes if possible. (If patient not in control, place on bed pan after insertion or observe closely.)
    c. instruct patient to call you when ready for bed pan or for assistance to bathroom. When called, assist patient, give privacy, but stay close at hand.
    d. when patient finished with elimination, assist with cleaning as needed according to prescribed procedure.

DEMONSTRATION OUTLINE

ACTIVITIES

B. 31. (Cont.)

e. observe time, amount and consistency of bowel movement.

32-37. Same as steps #31-36 for inserting a vaginal suppository.

C. Steps for Administering a Vaginal Cream.

1. Check the patient's chart for verification of the medication dosage, mode of administration, time of administration, and area of administration.
2. At the appropriate time, proceed to prepare and administer the medication.
3. Obtain keys, go to medication storage area and unlock medication area.
4. Wash hands in adjacent facilities.
5. Obtain vaginal cream with applicator and verify the label with the doctor's order.
6. Place the medication and applicator on a clean paper towel on the medicine tray.
7. Obtain a disposble examination glove (if desired), lubricant, and two paper towels, and place all items on medicine tray.
8. Take medicine tray with supplies and medication to the patient's unit.
9. Establish the patient's identity.
10. Explain to patient what you are going to do.
11. Obtain bath blanket or sheet for drape and toilet tissue.
12. Screen patient and adjust bed height.
13. Verify medication, dosage, time, and method of administration.
14. Place the patient in dorsal recumbent position.
15. Drape the patient appropriately.
16. Place a paper towel under the patient's buttocks.
17. Place a small amount of lubricant on another paper tower or tissue.

ACTIVITIES

C. (Cont.)

18. Remove cap from medication tube and screw nozzle end of applicator on tube.
19. Gently squeeze tube to force correct amount of medication into the applicator.
20. Unscrew applicator from tube.
21. Lightly coat tip of applicator with lubricant.
22. With one hand separate the labia and find the vaginal opening.
23. Insert the applicator into the vagina gently. The entire length of applicator barrel should be inserted.
24. Press plunger in completely to instill medication.
25. Remove applicator and place in clean paper towel.
26. Use toilet tissue to clean excess lubricant from patient.
27. Remove paper towel from under patient and discard.
28. Make patient comfortable and ask her to remain in bed for a few minutes.
29. Return medicine tray, medication and lubricant to medication storage area.
30. Wash applicator thoroughly with soap and warm water and place in Sterilizing Solution provided by facility. (Do not boil.)
31. After sterilization return applicator to designated storage area to be used only on same patient.
32. Record and/or report insertion of vaginal medication, time, and any pertinant observations made before, during and after insertion.

INSERTIN VAGINAL OR RECTAL MEDICATION

INSTRUCTIONS

1. During your scheduled laboratory time:
    a. have your partner assist you as a patient or as an observer.* (Your teacher will inform you if you are to simulate inserting medication with your partner or are to use a mannequin.)
    b. turn to the two (2) patient situations for vaginal insertion.
    c. practice both situations using the corresponding Kardex.
    d. follow the check list.
    e. turn to the two (2) patient situations for rectal insertion.
    f. practice both situations using the corresponding Kardex.
    g. follow the check list.**
    h. be sure to keep in mind those factors given in the lecture and demonstration.

2. Assist your partner in inserting vaginal and rectal medication.

* If your partner acts as your patient, an additional classmate may be needed to follow the check list.

**At the time of testing you will draw for a situation in medication for vaginal insertion and one for rectal insertion; you will obtain supplies for each. Upon successful completion of the vaginal insertion, you will immediately proceed to the rectal insertion.

PATIENT SITUATIONS
FOR
VAGINAL SUPPOSITORIES

ACTIVITIES

SITUATION # 1

Ms. Velma Sherman is a 73-year-old female who developed a vaginal discharge. Dr. Frost examined her and said she has Atrophic Vaginitis and has a moderately inflammed and irritated vaginal tract. You are working the 3-11 p.m. shift and are assigned to medication. Prepare and administer the medication ordered for Ms. Sherman at 9 p.m.

KARDEX

DATE	MEDICATIONS	HOUR			
7/1/81	Motrin 300mg. Tab T q.i.d.	9	1	5	9
3/1/81	AVC/Dienestrol Suppository				
	insert into vagina b.i.d. 9am·9pm	9			9

DIAGNOSIS: Atrophic Vaginitis Osteoarthritis			DIET: Regular
Sherman, Velma	# 44823	AGE: 73	DR. Frost

PATIENT SITUATIONS
FOR
VAGINAL SUPPOSITORIES

ACTIVITIES

SITUATION # 2

Mrs. Mary Carter is a 79-year-old female recently admitted to Room #220 of the nursing home where you work. When admitted she was in a very poor state of health. However, with proper diet and medication she is much improved except for a fungus infection that has spread throughout her body. The infection has also affected her skin, especially her arms, legs and vaginal region. Oral, topical and vaginal medication have been ordered by Dr. Richards. You are to administer Mrs. Carter's vaginal medication for 9:00 p.m.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Declomyicn 150Mg. capT q.6h.	9	3	9	3
2/1/81	Lotrimin Cream 1% - apply				
	Topically To irritated areas on				
	arms and legs b.i.d. 9-9	9			9
2/1/81	Gyne-Lotrimin vaginal cream				
	insert 1 applicator ful @ h.s.				9
DIAGNOSIS Gen. + Vaginal Infection		DIET: Regular			
Carter, Mary	# 91543	AGE: 79	DR. Richards		

CHECK LIST
FOR
INSERTING VAGINAL OR RECTAL
SUPPOSITORY

ACTIVITIES

U	S	
_____	_____	1. Verify order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtain keys for medication area (if applicable).
_____	_____	3. Wash hands before proceeding with medication.*
_____	_____	4. Verify label on medication wrapper or container with order.*
_____	_____	5. Assemble medication and any appropriate supplies (if applicable).
_____	_____	6. Identify patient in correct manner.*
_____	_____	7. Explain task to patient.
_____	_____	8. Assemble appropriate supplies in patient's unit.
_____	_____	9. Provide privacy for patient.
_____	_____	10. Position patient properly for task being performed.*
_____	_____	11. Drape patient correctly for task.
_____	_____	12. Protect linens during task.
_____	_____	13. Verify medication with order at the bedside.*

Module #A-9-30

CHECK LIST
FOR
INSERTION VAGINAL OR RECTAL
SUPPOSITORY

ACTIVITIES

U	S	
		14. Insert suppository medication correctly for area of insertion.*
		15. Maintain medical asepsis during suppositoary insertion.*
		16. Maintain safety factors for patient during task.*
		17. Observe patient during suppository insertion.*
		17. Maintain safety factors for patient.*
		18. Make patient comfortable following insertion.
		19. Clean up patient area insertion.
		20. Recognize limitation in regard to insertion or related tasks (if applicable).*
		21. Sequence steps of task for best use of time and materials.
		22. Record and/or report insertion and observations accurately.*
		23. Complete insertion of suppository within time span.*

* *

100% accuracy necessary on all points with *.

75% accuracy necessary on all other points. (May miss no more than 3)

Module #A-9-30

PATIENT SITUATIONS
FOR
RECTAL SUPPOSITORIES

ACTIVITIES

SITUATIONS # 1

Mr. Charles Smith is a 76-year-old male in Room #148 of the nursing home. He has a chronic ulcer with moderate anemia. He is up and about for short periods of time, but has to rest a great deal. He is on appropriate medication and diet for his condition. He periodically has constipation due to his medication and diet. You are administering medication on the 7:00 a.m. - 3:00 p.m. shift. At 8:30 you are informed that Mr. Smith states he is uncomfortable and has not had a bowel movement for two days. You are to give the medication that has been ordered for his constipation.

KARDEX

DATE	MEDICATIONS	HOUR			
2/1/81	Pro-Banthine 7.5 mg. Tab T T.I.D. A.C.	7^{15}	11^{15}	4^{15}	
2/1/81	Dulcolax 10 mg. Suppository T Rectally				
	after breakfast if no B.M for				
	2 days				

DIAGNOSIS: Chronic ulcer, Anemia

DIET: Regular

Smith, Charles

148

AGE: 76

DR. Thomas

PATIENT SITUATIONS
FOR
RECTAL SUPPOSITORIES

ACTIVITIES

SITUATION # 2

Mr. Joshua Phillips is a 64-year-old male in Room #336 of the medical unit. At 11:30 p.m. last night he had an acute asthmatic attack. He had medication for his acute attack and rested fairly well during the night. You have been assigned to give medications and treatments on the 7:00 a.m. to 3:00 p.m. shift. You have given him his early morning medication, and are about to leave the room when Mr. Phillips experiences an acute asthmatic attack. You are to give the medication the doctor has ordered for such an episode.

KARDEX

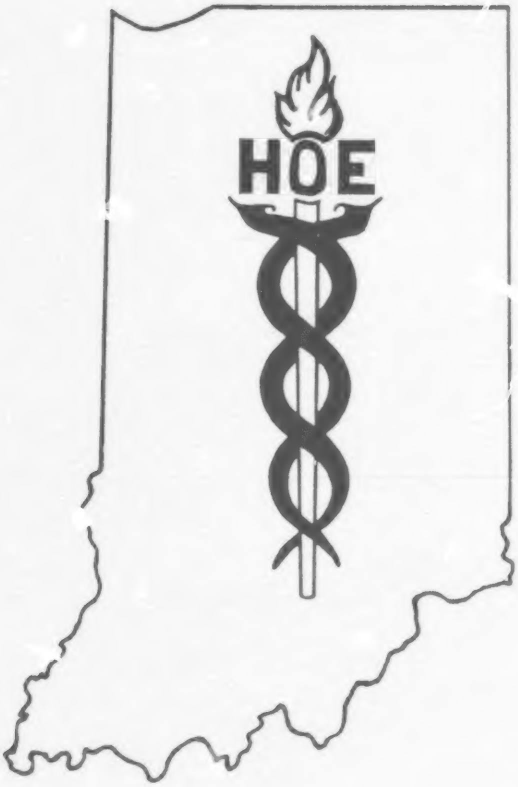
DATE	MEDICATIONS	HOUR		
2/1/81	Elixophyllin 200mg cap T TID	7am	3pm	9pm
	(give on empty stomach)			
2/1/81	Aminophylline 500 mg. Suppository T			
	rectally for acute asthmatic			
	attack q.4 h. p.r.n.			

DIAGNOSIS: Bronchial Asthma - Emphysema			DIET: Regular
Phillips, Joshua	# 336	AGE: 64	DR. Martin

INSTRUCTIONS

1. Check with your teacher to make certain you have completed all activities.
2. If all acitvities are completed and you feel you have reached the objective, tell your teacher you are ready for the "Master Test."
3. If all activities are completed and you do not feel ready to take the "Master Test", SEE YOUR TEACHER.

INDIANA HEALTH OCCUPATIONS EDUCATION



MASTER TESTS

A - 9 - 1 thru A - 9 - 30

ADMINISTRATION OF MEDICATION FOR UNLICENSED NURSING PERSONNEL

Administered by the Division of Vocational Education
Indiana Department of Public Instruction

First edition published 1978. Revised edition 1981

OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICATIONS

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.

2. Go to the written testing area.

3. Turn to page 2 .

4. Write your name and date on the proper spaces.

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________ DATE: ____________

OVERVIEW OF PREPARATION AND ADMINISTRATION OF MEDICINE

MASTER TEST

PART I - MATCHING

Place the letter from the statement in Column II beside the word that best describes it in Column I.

Column I	Column II
____ 1. Federal Food, Drug and Cosmetic Act	A. Indicates which medications must have prescriptions and which may be sold over counter
____ 2. United States Pharmacopeia	B. Requires new medications be effective and safe for intended use
____ 3. Social Security Amendments of 1965	C. All persons administering medications for Medicare - Medicaid providers must have completed a state approved training program in medication administration
____ 4. Harris Bill	D. Publication that lists current medications that meet standards of national committee
____ 5. Durham - Humphrey Amendment	E. Controls all importing, selling, mixing, etc., of opium, cocaine and their derivatives (narcotics) plus other harmful substances
____ 6. National Formulary	F. Strengthens interstate control over stimulants and depressants
____ 7. Kefauver - Harris Amendment	G. Indicates who may order medications and who may administer them
____ 8. Controlled Substance Act of 1970	H. Publication that lists medications that meet standards of national committee, but not in great usage
____ 9. Public Law #92-223 of 1974	I. Prevents altered or improperly marked foods, medications, etc., from being exchanged between states
____ 10. Physicians Desk Reference	J. Publication of medications in frequent use. Information provided by drug manufacturers

GO ON TO PAGE 3

MASTER TEST

PART II - TRUE AND FALSE

Read through each statement carefully. Write a T before the statement if TRUE and F if FALSE. If you mark the statement FALSE, underline the word or phrase that makes it a false statement.

_____ 1. To be competent means to be able to perform at the level of the average person.

_____ 2. By law, only doctors and registered nurses may administer medications.

_____ 3. A student should always know the purpose and reason for learning.

_____ 4. In addition to giving medications to patients, medication personnel also have responsibilities before and after administration.

_____ 5. The major method of instruction for this course is by assignments from the textbook.

_____ 6. The Food and Drug Administration releases a medication for public use after it is assayed.

_____ 7. Attending lectures and demonstrations, participating in group discussions and practicing in the laboratory area are all types of student activities.

_____ 8. When a medication is standardized, animal testing must be done before the medication is tested on humans.

_____ 9. A learning module or package is the only method of instruction for this medication course.

GO ON TO PAGE 4

PART II - TRUE AND FALSE (CONT.)

_____ 10. If a student reaches a learning objective, he/she will be competent in that area of study or manual task.

_____ 11. When administering medication to a patient, the health worker is not responsible for getting the patient ready for the medication.

_____ 12. After administering medication to a patient, the health worker is responsible for cleaning up and/or disposing of equipment used.

_____ 13. If a patient has an effect (favorable or unfavorable) an hour or more after the medication is given, the effect need not be recorded.

_____ 14. If you would administer medication prepared by another person, you would be responsible for any errors made during the preparation.

_____ 15. For the medication person who knows the patients very well, it is not necessary to identify the patient when administering medication.

PART III - COMPLETION

In your own words fill in the blanks.

STATEMENT: This course will provide an unlicensed individual with entry level competence in:

1. ____
2. ____
3. ____
4. ____
5. ____

GO ON TO PAGE 5

MASTER TEST

PART IV - MULTIPLE CHOICE

The following questions are multiple choice. Read each question and the four possible answers carefully. Select the one best answer and circle the letter in front of it.

1. To say that a medication has undergone assay or bioassay means that a medication has been:
   a. animal tested
   b. released for use by the F.D.A.
   c. human tested
   d. strength and purity tested

2. When health workers are assigned to administer medications, they have responsibilities before the administration. All of the following are the responsibility of that medication person except:
   a. following the order
   b. correcting label errors
   c. preparing the medication
   d. using proper equipment
3. When health workers are assigned to administer medications, they have responsibilities after the administration. All of the following are the responsibility of that medication person except:
   a. recording the administration
   b. observing the patient for effects
   c. recording effects
   d. receiving an order change from the physician
4. The major reason that medications must go through the standardization process is so that medications will:
   a. look alike and be pure
   b. be a standard size and be pure
   c. have guaranteed strength and purity
   d. be pleasant to take and be pure

SCORE _____ TURN TO PAGE 6

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.
2. If you passed the Master Test for this module, consult your schedule for the module you should start next.
3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in the module.
4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test, which you will take in a traditional testing area and complete in not more than 30 minutes.

2. Go to the written testing area.

3. Turn to the next page.

4. Write your name and date on the proper spaces.

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ____ DATE: __________________

PRINCIPLES OF MEDICATION THERAPY

MASTER TEST

PART I - MATCHING

Place the letter in front of the phrase in Column II beside the word that best describes it in Column I.

	COLUMN I		COLUMN II
_____	1. Vitamins	A.	cause infection
_____	2. Absorption	B.	relieves pain
_____	3. Hormones	C.	kill invading organisms
_____	4. Distribution	D.	prevent disease
_____	5. Antibiotics	E.	maintain health
_____	6. Excretion	F.	medication received into the body
_____	7. Vaccines	G.	eliminated from body
_____	8. Reception	H.	alter body processes
_____	9. Aspirin	I.	action of medication in body, other than one intended
_____	10. Metabolism	J.	body uses needed medication; converts extra to be excreted
_____	11. Barium	K.	medication taken from site of introduction to bloodstream
		L.	helps with diagnosis of disease
		M.	taken by bloodstream to proper place

PRINCIPLES OF MEDICATION THERAPY

MASTER TEST

PART II - MULTIPLE CHOICE

Read through the questions carefully. Select the one best answer for each question. Circle the letter in front of that answer.

1. The term "medication action" means:
   a. the way in which medications do their job.
   b. how a medication is absorbed by the body.
   c. how a medication is elimintated from the body.
   d. how a medication is delivered to the cells.

2. Medications given for "local action" are medications that:
   a. will not travel in the blood stream.
   b. always travel in the blood stream.
   c. act primarily on the skin.
   d. act at the site of application.

3. Examples of medications that kill or weaken invading organisms would be:
   a. Adrenalin and Dexidrine.
   b. Iron and Calcium.
   c. Iodine and Penicillin.
   d. Seconal and Codeine.

4. All of the following are actions of medications except:
   a. Slow down cell activity.
   b. Diagnose disease.
   c. Increase cell activity.
   d. Replace lacking substances.

MASTER TEST

PART II - MULTIPLE CHOICE (CONT.)

5. Medications given for "systemic action" are medications that:
   - a. Are not used at the site of administration
   - b. Travel in the blood stream.
   - c. Are excreted if not used.
   - d. All of the above.

6. Examples of medications that cause irritation would be:
   - a. Iodine and Penicillin.
   - b. Castor Oil and Dulcolax.
   - c. Seconal and Codeine.
   - d. Adrenalin and Dexidrine.

7. Examples of medications that slow down cell activity are:
   - a. Seconal and Codeine.
   - b. Iron and Calcium.
   - c. Castor Oil and Dulcolax.
   - d. Iodine and Penicillin.

MASTER TEST

PART III - MATCHING

Place the letter of the phrase in Column II beside the appropriate term in Column I.

EFFECTS OF ANY SINGLE MEDICATION

	COLUMN I		COLUMN II
_____	1. Cumulative Effect	A.	Poisonous effect - could be harmful to point of death
_____	2. Drug Idiosyncrasy	B.	Reaction - patient sensitive
_____	3. Drug Tolerance	C.	Additional effect besides desired one
_____	4. Primary Effect	D.	Slow excretion - causes medications to accumulate in body
_____	5. Drug Dependency	E.	Must have - demanded
_____	6. Allergic Effect	F.	Desired effect
_____	7. Toxic Effect	G.	In need [illegible]; patient relies on it
_____	8. Secondary Effect	H.	Very unusual or unexpected effect of medicine
_____	9. Addictive Effect	I.	Decreased response to medicine

EFFECT OF TWO OR MORE MEDICATIONS

_____	10. Antagonistic Effect	J.	Effect of one medication changed by the action of another
_____	11. Toxic Effect	K.	The action of one medication interferes with the action of another
_____	12. Drug Interaction	L.	Combined effects of each medication causes poisonous effect

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you *did not pass* the Master Test and have not gone through the module, go back and do all the activities in the module.

4. If you *did not pass* the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test consists of three (3) parts: Matching, Completion and Observation.

2. The Matching and Completion parts will be taken in a traditional testing area; the observation part will be done in a specified area or portion of the room.

3. Before beginning the test you will receive instructions from your teacher as to whether to begin with the written portion or the observation portion.

4. If you are to begin with the written portion:
   a. go to the written testing area,
   b. turn to next page,
   c. write your name and date in the proper spaces,
   d. when told to begin, complete the written portion of the test in pen or pencil,
   e. if you make an error, cross it out completely and write in our new answer,

5. If you are to begin with the observation area,
   a. go to the observation area,
   b. turn to page 17,
   c. follow the instructions written there for the observation portion.

NAME: ______________________________ DATE: ______________

MEDICATION FUNDAMENTALS

MASTER TEST

PART I - MATCHING

Place the letter of the phrase in Column II beside the word it best matches in Column I.

	COLUMN I		COLUMN II
_____	1. Insulin	A.	medication from chemical source
_____	2. Chemical Name	B.	lists trade and generic names of medications plus uses
_____	3. Oral Administration	C.	medication dissolved in alcohol
_____	4. Aspirin	D.	contains information about all available U.S. drugs
_____	5. Generic Name	E.	composition name
_____	6. Facts and Comparisons	F.	medication from plant source
_____	7. Digitalis	G.	doctors' association listing of new medications
_____	8. Trade Name	H.	brand or company name
_____	9. Physician's Desk Reference	I.	medication for diagnostic purposes
_____	10. Iron	J.	medication from animal substances
_____	11. Tincture	K.	given by mouth
		L.	official name of a drug, not patented
		M.	medication from mineral source

MEDICATION FUNDAMENTALS

MASTER TEST

PART II - COMPLETION

On the chart below identify the form of the medication listed for each category whether liquid, solid or semi-solid and record it in the form column.

CATEGORY	MEDICATION	FORM
1. Milks	Milk of Magnesia	
2. Ointment	Nupercainal	
3. Spray	Neosynephrine	
4. Tablet	Aspirin	
5. Fluid extracts	Cascara	
6. Suspension	Mylanta	
7. Capsule	Nembutal	
8. Syrup	Ipecac	
9. Liniment	Camphor	
10. Emulsion	Castor Oil	
11. Elixir	Terpin Hydrate	
12. Powder	Metamucil	
13. Spansule	Combid Spansule	
14. Spirits	Spirits of Ammonia	
15. Lotion	Calamine	
16. Tincture	Merthiolate	
17. Suppositories	Dulcolax	
18. Pill	Hinkle Pill	
19. Lozenge	Cepacol Lozenge	

MASTER TEST

INSTRUCTIONS

1. When you are finished with PART I AND PART II, check with the teacher to find out when you are to proceed with PART III of the test.

2. If you are to proceed to PART III immediately, go to the area for observation and follow the instructions at the top of page 17.

3. If you have completed PART III, turn to page 18.

MASTER TEST

PART III - OBSERVATION

In the spaces below, write the correct name of each category of medications displayed on the table. Select the correct category from those listed below. Write the category beside the identifying number; there may be more categories listed than medications displayed. You may take no longer than 4 minutes to observe the medications.

MEDICATION CATEGORIES

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________

capsule
emulsion
lotion
lozenge
ointment
pill
powder
spansule
spirit
spray
suppository
tablet
tincture

* *

When you are finished with PART III, if you have not completed PART I and PART II, proceed to the writing area and complete those parts.

If you have completed all parts of the test,

GO ON TO PAGE 18

SCORE ________________

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in the module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 40 minutes.

2. Go to the written testing area.

3. Turn to next page.

4. Write your name and date on the proper spaces

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________ DATE: ______________

MEDICATION ORDERS - WHAT THEY MEAN

MASTER TEST

PART I - IDENTIFICATION

Carefully examine the following doctor's medication orders. In the spaces provided under each order, identify what part(s) of the order has/have been omitted.

1. John Smith; Room 411; Terramycin; $\bar{q}$ 6 hrs. x 3 days; Dr. T. A. Books

____

2. 3/9/80; Sally Brown; Elixir Terpin Hydrate per os; 5 ml.; $\bar{q}$ 3-4 hrs. prn for cough

____

3. 4/3/80; Betty White; Room 608; Aqueous Penicillin; 250,000 u; I.M.; Dr. Stanley Waters

____

4. 4/15/80; Thomas Miller; Room 212; powder per os; 15 ml.; @ hs nightly; Dr. Herbert Lowe

____

5. 5/11/80; Room 349; Diabenese 25 mg.per os ; tab i daily; Dr. Samuel Sloan

____

6. 6/3/80; George Bass; Room 702; Ophthalmic Neo-Delta Cortef ointment; t.i.d. x 3 days; Dr. Steven Moore

____

MASTER TEST

PART II - COMPLETION

UNITS OF MEASURE

In the blanks below list units of measure for each of the three measuring systems used for medications.

Household

Dry	(example) teaspoon	Wet	____________
	____________		____________
	____________		____________

Apothecaries

Dry	____________	Wet	____________
	____________		____________
	____________		____________

Metric

Dry	____________	Wet	____________	Length	____________
	____________		____________		____________
	____________		____________		

MASTER TEST

PART III - MULTIPLE CHOICE

Read through each question carefully. Select the one best answer and circle the letter in front of it.

1. The abbreviation that means "freely as desired" is:
    - a. A.D.
    - b. ad lib.
    - c. O.S.
    - d. $\bar{a}\bar{a}$.

2. The symbol Rx actually means:
    - a. take
    - b. with.
    - c. of each.
    - d. write on label.

3. The medical term that means to "flush mucous membrane with medication" is:
    - a. inunction.
    - b. inhalation.
    - c. instillation.
    - d. irrigation.

4. The abbreviations or symbols that belong to weights of the metric system are:
    - a. c; tbsp; oz; gtt.
    - b. Gm; mg; kgm.
    - c. ℥; ʒ; dr; gr.
    - d. L; ml; kl.

5. Placing medication under the tongue is referred to as medication by:
    - a. buccal.
    - b. hypodermic.
    - c. sublingual.
    - d. intradermal.

MASTER TEST

PART III - MULTIPLE CHOICE (CONT.)

6. When the abbreviation N.P.O. is used in a medication order it means the patient should:
    - a. not have the medication repeated.
    - b. have as much medication as required.
    - c. have the medication discontinued.
    - d. not have anything by mouth.

7. The abbreviation O.D. is seen in a medication order when the medication is given:
    - a. in both eyes.
    - b. in the right eye.
    - c. in ointment form.
    - d. in the left eye.

8. The Apothecaries' system is easily recognized because of the following abbreviations or symbols:
    - a. m, ʒ, ℥.
    - b. Gm, M, L.
    - c. oz, C., lb.
    - d. mg, mm, ml.

9. When medication is given by having the patient swallow it, we say the medication has been by:
    - a. inunction.
    - b. intramuscular injection.
    - c. oral administration.
    - d. instillation.

PART III - MULTIPLE CHOICE (CONT.)

10. A proper definition of a "system of measurement" for medication would include all of the following except:
    a. it is a universally accepted standard.
    b. it can measure volume and weight.
    c. it is frequently revised.
    d. it is accurate.

PART IV - INTERPRETATION

In the space provided below each doctor's orders, write in the actual meaning for each one.

1. Nitroglycerin tabs i 0.4 mg.sublingually p.r.n.

2. Pamine 2.5 mg.p.o., t.i.d., a.c. & h.s.

3. Donnagel 30 cc. q.3 h.p.o. for 3 days

4. Neomycin Sulfate 1.0 Gm.q.h. for 4 h.then 1.0 Gm q. 4 h.for four doses p.o.

5. Sulfisoxozole 4% ophthalmic sol. gtt. ii O.D. t.i.d.

MASTER TEST

PART V - COMPLETION

Write the following expressions as they would be written in a doctor's medication order:

1. __________ 15 minims
2. __________ 500 cubic centimeters
3. __________ 4 drams
4. __________ five tenths grams
5. __________ five grains

Write the following expressions as you would read them:

6. gr. xxx __________________________
7. pt.v __________________________
8. 250 mg __________________________
9. ℥ iii __________________________
10. 1000 ml (cc) __________________________

or

____

SCORE ______________

UPON COMPLETION OF THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.
2. Go to the written testing area.
3. Turn to the next page.
4. Write your name and date on the proper spaces.
5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.
6. If the teacher calls time before you are finished, you must stop working.
7. Take your test to your teacher or grade it, according to instructions.

NAME: ____________________ DATE: ____________

PRINCIPLES OF MEDICATION ADMINISTRATION

MASTER TEST

PART I - MULTIPLE CHOICE

Read each question carefully. Select the one best answer for each one. Circle the letter in front of your answer.

1. The Unit-Dose system of packaging medications for patients is being used more all the time. An advantage of Unit-Dose packaging is:
   - a. a large supply can be kept
   - b. contamination is decreased
   - c. the Kardex can be eliminated
   - d. it is less expensive

2. A dose of Digitalis (heart medication) is due at 9:00 a.m.; the patient is in therapy. The patient's roommate, in the next bed, is sitting in a chair. He assures you that he will give the medication to the patient as soon as he returns. You should:
   - a. leave the medication at the bedside.
   - b. skip the medication for this morning.
   - c. return in a short time to see if the patient has returned.
   - d. chart the medication as refused.

3. A stock bottle of Maalox liquid is kept in the medication area. After you prepared the medication, the patient refused to take it. You should:
   - a. return it to the medication room to be used for the next time.
   - b. dispose of it in a proper manner.
   - c. pour it back into the stock bottle.
   - d. administer it to another patient who needs it.

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MASTER TEST

PART I - MULTIPLE CHOICE (CONT.)

4. The main advantage in the Unit-Dose system of medication packaging is that it:
   a. helps in credit processing.
   b. provides medication identification until given.
   c. decreases contamination.
   d. saves time in preparation.

5. While preparing medications, the medications person dropped a tablet of Demerol 25 mg on the floor. He/she was the only person near the medication area. He/she should:
   a. throw the tablet away and record it as wasted.
   b. carry the tablet in his/her pocket until someone comes.
   c. find someone as soon as the medications are all prepared and then dispose of it properly.
   d. stop what he/she is doing and take it to the charge nurse immediately.

6. The doctor orders 1.0 Gm. of an oral medication. The label on the medication container indicates that each tablet is 0.5 Gm in strength and reads, "Give one tablet." In preparing the medication you should:
   a. return the medication to the pharmacist for the correct dosage.
   b. give two tablets of the medication.
   c. contact the charge nurse for clarification of the order.
   d. give one-half tablet of the medication.

PART I - MULTIPLE CHOICE (CONT.)

7. Personnel administering Schedule II controlled substances in health facilities are required to sign for every dose removed from the locked drawer or cabinet to:
    - a. protect the patient from overdose.
    - b. prevent theft and misuse of the controlled drug.
    - c. help the bookkeeping department charge for the medication.
    - d. provide the State with statistics about drug use.

8. Charting of medications should be done:
    - a. as soon as possible after administration.
    - b. just before administering.
    - c. at the end of the shift.
    - d. once a week.

PART II - COMPLETION

In the space provided below list the "five rights" of medication administration:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

PART III - TRUE & FALSE

Read through each statement carefully. Place a T before the statement if TRUE and F if FALSE. If you mark the statement FALSE, underline the word or phrase that makes it a false statement.

_____ 1. Aseptic technique helps reduce chances of spreading disease germs when giving medications.

PART III - TRUE & FALSE (CONT.)

_____ 2. If you are administering medications to a patient in his room and you are called to the telephone, you may leave the medication cart/tray in the patient's room.

_____ 3. If you have difficulty reading the label on a bottle of liquid medication you should change the label for others.

_____ 4. Schedule II substances are kept under double lock.

_____ 5. You start to administer a medication to Mrs. Jones, but she states that they do not look like her pills. You should encourage her to take the medication and check it later.

_____ 6. The doctor asks you to prepare a dose of oral Crystodigin (heart medication) for him to administer. The medication is in quantity container. You should place the medication in a medicine cup and take it and the container on a tray to the doctor.

_____ 7. If a liquid medication is discolored, it is probably alright to go ahead and administer the medication.

_____ 8. You are not assigned to give medications. The medication nurse is very rushed and asks you to give a Unit-Dose medication she has prepared for one of your patients. You may give the medication.

_____ 9. In order to save time, you may chart a medication before it is given.

_____ 10. It is wise to at least temporarily omit a medication that is suspected of producing allergic reactions.

_____ 11. It is important to remain with the patient until he has swallowed the oral medications you have given him.

MASTER TEST

PART III - TRUE & FALSE (CONT.)

_____ 12. If you have been taking care of a patient for a long period of time, there is no need to verify her identity before administering her medication.

_____ 13. If a patient refuses a medication, and reasonable efforts fail to persuade him to take it, you should report it immediately and chart the incident on his chart.

PART IV - MATCHING

Place the letter from the grouping of controlled substances in Column II beside the definitions or medications it matches in Column I.

Column I

_____ 1. Mild sedatives and tranquilizers
_____ 2. Phenobarbital
_____ 3. Medically used; high abuse potential
_____ 4. Lomotil
_____ 5. Not medically used; has abuse potential
_____ 6. Moderately high abuse potential-medically used
_____ 7. Valium
_____ 8. Demerol (Meperidine)
_____ 9. Low Abuse potential in normal doses
_____ 10. LSD

Column II

A. Schedule I
B. Schedule II
C. Schedule III
D. Schedule IV
E. Schedule V

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a "charting situation test" which you will take in the written testing area in not more than 30 minutes.

2. Go to the written testing area.

3. Two (2) out of a possible four situations have been selected for the Master Test.

4. Write your name and date in the proper spaces.

5. You are to assume you have verified the medication order, administered the medication according to the situation and made the given observations. When told to begin, you should record the necesarry information on:
    a. the nurses' notes,
    b. the Schedule II or III controlled medication sheet, and the medication sheet

6. It will be necessary to do all your recording with pen. If you make any errors, correct them in the proper manner used for patients' records.

7. If the teacher calls time before you are finished, you must stop.

8. Take your test to the teacher for grading.

(Check List For Charting Medications will be used by the teacher for grading each of your chartings.)

NAME: ______________________________ DATE: ______________

MASTER TEST

CHECK LIST FOR CHARTING MEDICATIONS

U	S	
_____	_____	1. Complete headings on all sheets.
_____	_____	2. Enters dates and times appropriately.
_____	_____	3. Records medication on medication record correctly for agency.
_____	_____	4. Signs all entries correctly for agency.
_____	_____	5. Charts all stats and P.R.N.'s correctly for agency.
_____	_____	6. Charts observations before, during and after administration, according to situation.
_____	_____	7. Charts legibly and neatly (with not blank spaces).
_____	_____	8. Uses proper descriptive terminology.
_____	_____	9. Entries are concise and clear.
_____	_____	10. Uses standard abbreviations.
_____	_____	11. Spells correctly with entries.
_____	_____	12. Corrects error(s) in proper manner.
_____	_____	13. Uses pen (proper color).
_____	_____	14. Completes charting in allotted time.

SCORE ______________

CHARTING SITUATIONS

ACTIVITIES

SITUATION # 1

On February 3, 1981, you are working 3-11 and are assigned medications. When you made rounds Mr. Timothy Brown told you his bowels had not moved for several days. You promised to check his PRN orders and give him whatever the physician had ordered. Records verify that he has not had a bowel movement for 3 days so you prepare the laxative ordered with your h. s. medications. At 7:30 p.m. when you return from supper the charge nurse tells you Mr. Brown is very agitated. He threw his dinner tray at the dietary worker and refuses to allow anyone in his room until he receives his laxative. The charge nurse advises you to give Mr. Brown his PRN medication for anxiety also. You prepare and administer Mr. Brown's PRN'S and his routine 8 p.m. medications. At 8:30 p.m. when you return he is quiet and more comfortable. His bowels have not moved. Chart the medications you gave and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
1/2/81	Crystodigin 0.1 mg. Tab Ṫ q h.s. (ck pulse)				8pm
1/2/81	Peritrate 10 mg. Tab Ṫ q.i.d.	8	12	4	8
1/2/81	Milk of Magnesia 30cc. h.s. p.r.n.				
	for constipation				
1/21/81	Thorazine 25 mg. Tab Ṫ q.8 h. p.r.n.				
	for agitation/anxiety				

DIAGNOSIS: Angina Pectoris / CHF Organic Brain Syndrome			DIET: Mech Soft
Brown, Timothy	# 354	AGE: 82	DR. Small

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Brown, Timothy PHYSICIAN Dr Small MEDICAL CASE # 44402

30 DAY MEDICATION RECORD

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
1/2/81 Peritrate 10 mg Tab T qid	8 12 4 8																	
1/2/81 Crystodigin 0.1 mg Tab T qhs (check pulse)	Pulse → 8pm																	
1/2/81 Milk of Magnesia 30cc hs prn for constipation	P R N 8																	
1/21/81 Thorazine 25 mg Tab T q8h prn agitation - anxiety	P R N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies		
DIAGNOSIS	Angina Pectoris, CHF Organic Brain Syndrome	Diet	Mechanical Soft
PHYSICIAN	Dr. Small	Rehab Potential	Fair
PATIENT	Brown, Timothy	ROOM # 354	PATIENT # 44402
		MONTH & YEAR	Feb 1981

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN
B. CIRCLE INITIALS WHEN MEDICATION REFUSED
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS
1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Brown, Timothy

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NAME: ______________________________ DATE: ______________

MASTER TEST

CHARTING MEDICATIONS

CHECK LIST

U	S	
_____	_____	1. Complete headings on all sheets.
_____	_____	2. Enters dates and times appropriately.
_____	_____	3. Records medication on medication record correctly for agency.
_____	_____	4. Signs all entries correctly for agency.
_____	_____	5. Charts all stats and P.R.N.'s correctly for agency.
_____	_____	6. Charts observations before, during and after administration, according to situation.
_____	_____	7. Charts legibly and neatly (with no blank spaces).
_____	_____	8. Uses proper descriptive terminology.
_____	_____	9. Entries are concise and clear.
_____	_____	10. Uses standard abbreviations.
_____	_____	11. Spells correctly with entries.
_____	_____	12. Corrects error(s) in proper manner.
_____	_____	13. Uses pen (proper color).
_____	_____	14. Completes charting in allotted time.

SCORE ____________

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CHARTING SITUATIONS

ACTIVITIES

SITUATION # 2

On February 3, 1981, you are working 3-11p.m. and are assigned to medications. ONe of your patients is Mrs. Jane Woods, a 25-year-old woman with Multiple Sclerosis and a Urinary Tract Infection. When you check her after supper Mrs. Woods tells you she is tired and has not slept well recently. She would like her sleeping medication with her 8 p.m. routine medications. You check her kardex and prepare the PRN ordered. After you sign out the medication, there are 23 capsules remaining. Mrs. Woods takes her 8 p.m. medications and at 8:30 p.m. is sleeping soundly. Chart the medications you administered and the observations you made.

KARDEX

DATE	MEDICATIONS	HOUR			
12/20/80	Azo-gantrisin 0.5 Gm Tab ṫ q12h	8			8
12/20/80	Milk of Magnesia 30 cc q.h.s				8
12/20/80	Tigan 100 mg cap ṫ q8h prn/nausea				
12/20/80	Seconal 100 mg cap ṫ h.s. prn/sleep				

DIAGNOSIS: Multiple sclerosis Urinary Tract Infection			DIET: Regular
Woods, Jane	# 321	AGE: 25	DR. Hall

30 DAY **MEDICATION RECORD** Feb 1981

MEDICATION	HOUR	1	2	3	4	5	6	7	8	9	10	11	12	13	28	29	30	31
12/20/80 Azo-gantrisin 0.5 gm Tab † q 12 h	8 8																	
12/20/80 Milk of Magnesia 30 cc q hs	 8 pm																	
12/20/80 Tigan 100 mg cap † q 8 h p.r.n for nausea	P R N																	
12/20/80 Seconal 100 mg. cap † hs p.r.n for sleep	P R N																	

NURSES SIGNATURE AND INSTRUCTIONS ON REVERSE SIDE

ALLERGIES	No Known Allergies		
DIAGNOSIS	Multiple Sclerosis Urinary Tract Infection	Diet	Regular
PHYSICIAN	Dr. Hall	Rehab Potential	Poor
PATIENT	Woods, Jane	ROOM # 321	PATIENT # 99876	MONTH & YEAR Feb 1981

	INITIALS	NURSE'S SIGNATURE		INITIALS	NURSE'S SIGNATURE
1			7		
2			8		
3			9		
4			10		
5			11		
			12		

INSTRUCTIONS

A. PUT INITIAL IN APPROPRIATE BOX WHEN MEDICATION GIVEN
B. CIRCLE INITIALS WHEN MEDICATION REFUSED.
C. STATE REASON FOR REFUSAL ON NURSE'S NOTES.
D. PRN MEDICATIONS: REASON GIVEN AND RESULTS SHOULD BE NOTED ON NURSE'S PRN NOTES.
E. INDICATE SITE OF INJECTION WITH APPROPRIATE NUMBER (SEE BELOW).

INJECTION SITE NUMBERS

1. BUTTOCKS (GLUTEUS) LEFT
2. BUTTOCKS (GLUTEUS) RIGHT
3. ARM (DELTOID) LEFT
4. ARM (DELTOID) RIGHT
5. THIGH (QUADRACEPS) LEFT
6. THIGH (QUADRACEPS) RIGHT

NURSE'S PRN NOTES

DATE	HOUR	INITIAL	MEDICATION	REASON	RESULT

PATIENT'S NAME Woods Jane

NURSES NOTES

DATE/ TIME	PRN MED TREATMENTS DR. VISITS, VITALS	COMMENTS

PATIENT Woods Jane PHYSICIAN Dr. Hall MEDICAL CASE # 99876

CONTROLLED SUBSTANCE RECORD

Drug Name and Strength Seconal 100 mg caps	Patient's Name Woods, Jane
Script Number 7891011	Patient's Number 99876
Physician Dr. Hall	Room Number 321

Date	Time	Rec'd	Used	Bal	Signature
1/8/81	4 pm	30	from pharmacy		Joan Adams LPN
1/8/81	9 pm		T	29	Joan Adams LPN
1/10/81	8^{30} pm		ṫ	28	Ruth Williams QMA
1/15/81	9 pm		T	27	Joan Adams LPN
1/24/81	9 pm		T	26	Rebecca Collier R.N.
1/30/81	8^{30} pm		T	25	Ruth Williams QMA
1/31/81	8^{00} pm		T	24	Joan Adams LPN

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your teacher for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

LEGAL AND ETHICAL OBLIGATIONS OF MEDICATION ADMINISTRATION

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.
2. Go to the written testing area.
3. Turn to the next page.
4. Write your name and date on the proper spaces.
5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.
6. If the teacher calls time before you are finished, you must stop working.
7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________ DATE: ______________

LEGAL AND ETHICAL OBLIGATIONS OF MEDICATION ADMINISTRATION

MASTER TEST

PART I - TRUE AND FALSE

Read through each statement carefully. Place a T before the statement if TRUE and F if FALSE. If you mark the statement FALSE, underline the word or phrase that makes it a false statement.

____ 1. An incident report must be kept with the patient's chart at all times.

____ 2. An incident report alerts the facility administrator to the possibility of a law suit.

____ 3. When administering Schedule II controlled medications there is no need to check to see if the order is still valid.

____ 4. As the health care worker is about to administer a medication, the patient states, "I hope that is not penicillin because I am allergic to it." If the health care worker administers the medication anyway, and the patient has a reaction to it, the health care worker could be guilty of negligence.

____ 5. If a medications person makes a medication error, the charge nurse will always be held responsible.

____ 6. "Duty of Care" is a law that protects the patient whereas "reasonable care" can protect the health care worker.

____ 7. All orders must be reviewed and signed by the physician every 60 days in an Intermediate Care Area.

____ 8. The majority of emergency medications are administered by injection.

____ 9. Each health worker is responsible for his/her own actions.

MASTER TEST

PART II - MULTIPLE CHOICE

Read each question carefully. Select the one best answer and circle the letter in front of it.

SITUATION

Ms. Jones was the medication person on duty on 5/12/80 in the west wing of a local nursing home. She administered medications in her section throughout the 7:00 a.m. - 3:00 p.m. shift. By 2:30 p.m. she had administered all ordered medications except a new order for Mrs. B. Smith in Room #156. On the morning of 5/12/80 when the doctor came to see Mrs. Smith, she told him her right eye was itching severely. The doctor examined here eye, then ordered Neo-Cortef 0.5% Sterile Ophthalmic Ointment for her eye, stat (upon arrival) and then 3 times a day. The medication had been ordered but had not arrived by 2:30 p.m., so Ms. Jones started her charting. Medications came from the pharmacy at 2:40 p.m. The charge nurse (R.N.) checked the medications and informed Ms. Jones that Mrs. Smith's medication had arrived. Ms. Jones hurriedly got her supplies and the new medication, went to Mrs. Smith's room, instilled the medication and returned to the nurses's station. When she started to put the medication away, she noted that the label said Neo-Cortef Ointment 0.5% instead of Neo-Cortef Sterile Ophthalmic Ointment 0.5%.

Questions 1 - 7 pertain to this situation.

1. The first thing Ms. Jones should have done is:
    a. observe the patient.
    b. notify the doctor.
    c. fill out an incident report.
    d. notify the charge nurse.
2. If there were any serious consequences from this medication error, the real person at fault for this error would have been:
    a. the charge nurse.
    b. the pharmacist.
    c. Ms. Jones.
    d. everyone involved.

PART II - MULTIPLE CHOICE (CONT.)

3. The proper person to complete the incident report for this medication error would have been:
   a. the doctor.
   b. Ms. Jones.
   c. the charge nurse.
   d. the pharmacist.

4. The major violation of the "five rights" for this medication error would have been the wrong:
   a. dose.
   b. time.
   c. medication.
   d. method.

5. In order for Ms. Jones to have observed the patient properly for the effects of the medication, she should have checked the:
   a. patient's chart.
   b. doctor's order.
   c. pharmacy record.
   d. P.D.R.

6. As the person committing the medication error, Ms. Jones would have been responsible for all the following except:
   a. reporting the error.
   b. informing the patient.
   c. observing the patient.
   d. recording the error.

PART II - MULTIPLE CHOICE (CONT.)

7. If Mrs. Smith would have complications from the medication error, Ms. Jones may be charged with negligence, which means she might:
   a. be sent to jail for more than a year.
   b. lose her credentials.
   c. pay a settlement to the patient.
   d. be sent to jail for less than a year.

. . . .

8. If a patient's medication is the type that must be re-ordered every time it is filled, the person responsible for notifying the doctor to re-order is:
   a. the charge nurse.
   b. the medication aide.
   c. the administrator.
   d. the pharmacist.

9. While checking the supply of emergency medications, if the health care worker should notice a medication is missing he/she should:
   a. contact the pharmacist as soon as possible.
   b. report it to the charge nurse before going off duty.
   c. check the charts to see who obtained the medication.
   d. report it immediately to the charge nurse.

10. All medication personnel must be able to:
    a. obtain emergency medications when needed.
    b. administer all emergency medications.
    c. check emergency medication supplies.
    d. record emergency medications given.
        (1) all of the above
        (2) a, c, and d
        (3) b, c, and d
        (4) a and c

MASTER TEST

PART III - LISTING

In the spaces provided below, list the three emergency medications you have selected, listing them by trade name. Also give the method of administration and action.

EMERGENCY MEDICATION	METHOD OF ADMINISTRATION	ACTION
1.		
2.		
3.		

SCORE: ___________________

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UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.
2. Go to the written testing area.
3. Turn to the next page.
4. Write your name and date on the proper spaces.
5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.
6. If the teacher calls time before you are finished, you must stop working.
7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________ DATE: ______________

HEALTH, AGE AND BODY PROCESS
MASTER TEST

PART I - LISTING

In the spaces provided below, list at least ten (10) of the over-all factors that influence the effectivness of medications.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________

PART II - TRUE & FALSE

Read through each statement carefully. Place a T before the statement if it is TRUE and F if it is FALSE. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. Decreased lung function might affect excretion of medications from the body.

_____ 2. Effectiveness of a medication in the body might change if a patient should lose a large amount of weight.

_____ 3. Absorption of oral medications is more rapid and complete when they are given with meals.

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MASTER TEST

PART II - TRUE & FALSE (CONT.)

_____ 4. The presence of severe pain tends to increase a patient's resistance to certain medications.

_____ 5. Medications that are very irritating to the lining of the stomach are best tolerated if given with food.

_____ 6. Impaired circulation has no effect on medication effectiveness.

_____ 7. The body absorbs, distributes, metabolizes and excretes medications more effectively during maximum activity than during sleep.

_____ 8. Most oral medication are absorbed in the small intestine.

_____ 9. Almost all medications are distributed to the site of need by the action of the lungs.

_____ 10. Most medications are excreted from the body by the kidneys.

_____ 11. Metabolism is the means by which cells in a given area use the substances they need.

_____ 12. Drinking of fluids does not have much bearing on the effectiveness of oral medications.

_____ 13. The frequency with which medications are given has a direct bearing on their effectiveness.

_____ 14. Medications that are administered orally are usually abosrbed by the body more slowly.

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MASTER TEST

PART III - MATCHING

Place the letter of the factor listed in Column II beside the altered body state that usually affects it in Column I. The same letter will be used more than once for the various physical states.

COLUMN I

_____ 1. Diabetes

_____ 2. Diarrhea

_____ 3. Vomiting

_____ 4. Fever

_____ 5. Lung disease

_____ 6. Diseases of the blood vessels

_____ 7. Infection

_____ 8. Heart disease

_____ 9. Cancer of small intestine

_____ 10. Kidney disease

_____ 11. Anemia

_____ 12. Hemorrhage

_____ 13. Liver disease

COLUMN II

A. Absorption

B. Distribution

C. Metabolism

D. Excretion

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.
2. If you passed the Master Test for this module, consult your schedule for the module you should start next.
3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.
4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.

2. Go to the written testing area.

3. Turn to the next page.

4. Write your name and date on the proper spaces.

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________ DATE: ______________

CARE OF THE AGED AND LONG TERM PATIENT

MASTER TEST

PART I - TRUE & FALSE

Read through each statement carefully. Place a T before the statement if it is TRUE and F if it is FALSE. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. The term "aged" usually refers to anyone over age sixty-five.

_____ 2. Loss of appetite can be caused by a decrease in the number of taste buds.

_____ 3. For patients who have difficulty swallowing, medications might be crushed or mixed with food.

_____ 4. A slow circulation of the blood due to a failing heart would probably affect proper elimination of medications more than anything else.

_____ 5. Poor oral hygiene can result in loss of appetite.

_____ 6. Since elderly patients are slow and may take time to move, you should put medications in their mouths for them.

_____ 7. Aging is a gradual process which starts around age sixty-five.

_____ 8. The most important medicine(s) should be given first.

_____ 9. If a patient asks you to leave his medicine on his table, it is appropriate to do so if he is alert.

_____ 10. The aging process or a long-term illness frequently causes kidney problems. If kidney problems exist, the elimination of medications can be greatly affected.

_____ 11. Careful observation of elderly patients is necessary because they have an increased likelihood of side-effects.

_____ 12. Basic human needs change as one grows older.

_____ 13. If a change in the nervous system decreases the action of blood vessels, medication absorption, distribution and elimination could all be affected.

PART I - TRUE & FALSE (CONT.)

_____ 14. Crafts and games are good activities for the elderly and long-term patients.

_____ 15. Nursing care should be aimed at encouraging the patient to attain maximum independence.

PART II - MULTIPLE CHOICE

Read each question carefully. Select the one best answer. Circle the letter in front of the answer you have chosen.

SITUATION:

Mr. T. Foster is a 79-year-old male who has just been admitted to a nursing home. He had been living alone for 8 months, since the death of his wife. He is able to get around by himself, but sits in a chair most of the time. He is wearing dirty clothes, is unshaven, has not bathed recently, has bruises and small sores on his body, particularly his legs and hips. He states he falls a lot from tripping over things. Questions 1 - 3 pertain to this situation.

1. Good care for Mr. Foster should include:
   a. bathing in tub or shower.
   b. mouth care.
   c. care of nails.
   d. all of the above.

2. The small bruises and sores on Mr. Foster's legs and hips are probably due to his frequent falls. A very good way to prevent falling for him would be to:
   a. tell him not to walk alone.
   b. encourage him to use the handrails.
   c. keep him in bed.
   d. restrain him in a chair.

MASTER TEST

PART II - MULTIPLE CHOICE (CONT.)

3. If Mr. Foster had to be in bed very much, he could soon develop pressure sores on his hips and legs, especially where he was already bruised and had sore areas. Pressure sores can be prevented by:
   a. frequent change of position.
   b. rubbing reddened areas.
   c. keeping the bedding free of wrinkles.
   d. all of the above.
4. Changes in the muscles and bones due to aging or long-term illness mostly interfere with this action in medication effectiveness:
   a. elmination.
   b. distribution.
   c. absorption.
   d. metabolism.
5. For elderly or long-term patients who have difficulty swallowing medications, you could:
   a. raise the bed or assist patient to sitting position.
   b. crush or dilute the medication.
   c. place tablets or capsules far back on the tongue.
   d. all of the above.

6. Probably one of the most difficult things for a long-term patient to attain or achieve is:
   a. a way to make living.
   b. order and security.
   c. hope for the future.
   d. love and belonging.
7. A decrease in proper functioning of the stomach or intestines would mostly affect medication:
   a. absorption and distribution.
   b. metabolism and elimination.
   c. absorption and elimination.
   d. distribution and elimination.

MASTER TEST

PART II - MULTIPLE CHOICE (CONT.)

8. When giving medications to the elderly or long-term patient who is extremely slow, the health care worker should remember to:
    a. omit the medication to save time.
    b. have patience and take time.
    c. give half the medication at one time and half later.
    d. suggest the medication be given by injection.
9. The major action, in relation to medications, that is affected by changes in the kidney is:
    a. metabolism.
    b. elimination.
    c. distribution.
    d. absorption.
10. Health care workers taking care of long term patients should do all of the following except:
    a. listening to them.
    b. allow time to be independent.
    c. allow them to have dignity.
    d. encourage them to stay in their rooms.
11. The most difficult "basic need" for anyone to attain is:
    a. safety and security.
    b. self-realization.
    c. love and belonging.
    d. self-esteem.
12. Changes in diet which are helpful for an older person include:
    a. omitting desserts.
    b. providing small, frequent meals.
    c. serving all pureed food.
    d. limiting fluids.

MASTER TEST

PART II - MULTIPLE CHOICE (CONT.)

13. Because of changes in absorption, distribution, metabolism and elimination due to aging:
    - a. there is increased possiblity of side effects from medications.
    - b. the dosage ordered may be smaller than that for a young adult.
    - c. toxic effects are more likely.
    - d. all of the above.
14. Because of the lack of oxygen and inability to expand the lungs changes in the respiratory system could interfere with medication effectiveness mostly in the areas of:
    - a. distribution and metabolism.
    - b. absorption and elimination.
    - c. elimination and distribution.
    - d. metabolism and elimination.
15. The basic needs of the elderly person:
    - a. are the same as those of a young person.
    - b. change a great deal due to aging.
    - c. are no longer important to the person.
    - d. are limited to safety and security.

SCORE ______________

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

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NAME: ______________________________ DATE: ______________

HANDLING MEDICATIONS
MASTER TEST

PART I - MATCHING

Place the letter of the appropriate storage place in Column II beside the correct statement or term in Column I.

	COLUMN I		COLUMN II
_____	1. insulin	A.	emergency cart
_____	2. tablets	B.	locked box or compartment
_____	3. most suppositories	C.	medicine cabinet or cart
_____	4. syrups	D.	refrigerator
_____	5. capsules		
_____	6. oily substances		
_____	7. habit-forming medications		
_____	8. hormone products		
_____	9. medications for given area (wing or unit)		
_____	10. emergency medications		

PART II - TRUE AND FALSE

Read through each statement carefully. Place a T in front of the statement if it is TRUE and F if it is FALSE. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. Some medications require a dark bottle to prevent deterioration caused by light.

_____ 2. If a medication label is difficult to read, you should clearly relabel it.

_____ 3. The reason for observing aseptic practices is that there are always microorganisms (germs) in the environment that can cause illness under certain circumstances.

PART II - TRUE AND FALSE (CONT.)

_____ 4. If a medication bottle is not securely capped, chemical changes can occur in the medication.

_____ 5. Persons receiving medications from the pharmacy must sign for them, check them against the list of drugs ordered, and put them away properly.

_____ 6. If a medication shows any change in odor, color or consistency, it should be given first to get it used up.

_____ 7. Medical asepsis refers to sterilization which destroys all disease-producing microorganisms.

_____ 8. If possible, when a medication order is changed or a patient is discharged, medications should be returned to the pharmacy for credit.

_____ 9. The housekeeping department is responsible for cleaning inside medicine cabinets and the medicine refrigerator.

_____ 10. It is the responsibility of all medication personnel to help maintain records of medications needing refilling.

_____ 11. If a medication shows a past due "expiration date," it should not be administered to the patient.

MASTER TEST

PART III - CLASSIFICATION OF RESPONSIBILITIES

Listed below are four major responsibilities of medication personnel. Indicate what level of frequency each group of medication personnel is involved with each of the major responsibilities. Use the letters: F (frequently); O (occasionally) and N (never) in the appropriate blocks.

RESPONSIBILITY	MEDICATION AIDE	L.P.N. R.N.
1. Receiving medications		
2. Maintaining storage area		
3. Disposing of medications		
4. Ordering medications		

SCORE ______________

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UPON COMPLETION OF THE MASTER TEST

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NAME: ______________________________ DATE: ______________

MEDICATIONS FOR THE MUSCULOSKELETAL SYSTEM

MASTER TEST

PART I - MULTIPLE CHOICE

Read each question carefully. Select the one best answer: then circle the letter in front of the answer.

1. The major functions of the musculoskeletal system include:
    1. movement.
    2. circulation.
    3. shape and support.
    4. protection.

    (a) 1, 2, and 3
    (b) 2, 3, and 4
    (c) 1, 3, and 4
    (d) all of the above

2. A sudden and violent tightening of a muscle due to overwork or poor circulation is called:
    a. muscle atrophy.
    b. muscle strain.
    c. muscular dystrophy.
    d. muscle spasm.

3. Medications that are given for the relief of pain are known as:
    a. steroids.
    b. muscle relaxants.
    c. corticosteroids.
    d. analgesics.

4. Medications used to relieve the discomfort of sprains, strains or back pain are classified as:
    a. depressants.
    b. antirheumatics.
    c. muscle relaxants.
    d. antihistamines.

MASTER TEST

PART I - MULTIPLE CHOICE (CONT.)

5. An example of a musculoskeletal analgesic is:
    a. Robaxin.
    b. Aspirin.
    c. Delta - Cortef.
    d. Soma.

6. Fractures are usually caused by falls or severe blows to the body. All of the following are true of fractures except:
    a. fractures are the most common bone injury.
    b. fractures always have swelling at the site.
    c. fractures are frequently painful.
    d. fractures are common in the elderly.

7. A condition of the musculoskeletal system that is characterized by swelling and pain in one or more joints of the body is:
    a. Osteoporosis.
    b. Fractures.
    c. Arthritis.
    d. Rheumatism.

8. Corticosteroids are a potent group of medications and should be watched carefully for side-effects. An example of a corticosteroid would be:
    a. Soma.
    b. Deltasone.
    c. Indocin.
    d. Tylenol.

MASTER TEST

PART I - MULTIPLE CHOICE (CONT.)

9. A condition due to injury or overwork in which muscles and/or bones are stretched and become painful is referred to as:
   - a. muscle spasm.
   - b. rheumatism.
   - c. muscle fatigue.
   - d. muscle strain.

10. Musculoskeletal drugs cause frequent side effects. Symptoms to watch for include:
    - a. nausea, stomach discomfort.
    - b. headache.
    - c. dizziness.
    - d. all of the above.

11. A common cause for fractures in the elderly is the fact that their bones may be extremely brittle. If this condition exists the person is said to have:
    - a. Osteoporosis.
    - b. Rheumatoid arthritis.
    - c. Osteoarthritis.
    - d. Scoliosis.

12. Most medications for the musculoskeletal system are administered:
    - a. only p.r.n.
    - b. topically, and orally.
    - c. by intravenous injection.
    - d. by intramuscular injection.

MASTER TEST

PART II - SELECTION LISTING

In the spaces provided below, you are to list the five musculoskeletal medications you have selected. You should include at least 2 analgesics, 1 muscle relaxant, and one corticosteroid.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Analgesic			
2. Analgesic			
3. Muscle Relaxant			
4. Anti-inflammatory Corticosteroid			
5.			

SCORE: ________________

UPON COMPLETION OF
THE MASTER TEST

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MEDICATIONS FOR THE
NERVOUS AND SENSORY SYSTEMS

A-9-12

MASTER TEST

INSTRUCTIONS

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NAME: ______________________ DATE: ____________

MEDICATIONS FOR THE NERVOUS AND SENSORY SYSTEMS

MASTER TEST

PART I - MULTIPLE CHOICE

Read each question carefully. Select the one best answer; then circle the letter in front of the answer.

1. The nervous system is vital to the working of the human body, however, it cannot do everything. All of the following are functions of the nervous system except:
   a. coordinates sensations.
   b. receives outside sensations.
   c. reacts to sensations.
   d. carries sensations.

2. Medications that would be likely to help us think faster, raise the blood pressure and increase the rate of breathing would be known as:
   a. vasoconstrictors.
   b. analgesics.
   c. stimulants.
   d. mood elevators.

3. The major function of the structures that belong to the sensory system is that of:
   a. protection and support.
   b. reception of outside impulses.
   c. circulation of fluids.
   d. coordination of impulses.

MASTER TEST

PART I - MULTIPLE CHOICE (CONT.)

4. Depressants are medications that may:

1. relieve pain.	3. produce sleep.
2. control convulsions.	4. cause loss of sensation.

(a) 1 and 4
(b) 1 and 2
(c) all except 2
(d) all of the above

5. Examples of medications that provide rest and sleep are:
   a. Phenobarbital and Placidyl.
   b. Talwin and Indocin.
   c. Aspirin and Novacaine.
   d. Mellaril and Tylenol.

6. A medication that dilates the pupil of the eye:
   a. is called a mydriatic.
   b. aids in eye examinations.
   c. may cause difficulty focusing.
   d. all of the above.

MASTER TEST

PART II - RECOGNITION

From the disorders listed below, indicate at least five that are nervous system disorders and two that are sensory system disorders by placing the letter N in front of nervous system ones and S in front of sensory system ones.

1. _____ Arthritis
2. _____ Buerger's Disease
3 _____ Conjunctivitis
4. _____ Epilepsy
5. _____ Epistaxis
6. _____ Glaucoma
7. _____ Gout
8. _____ Huntington's Disease
9. _____ Impacted Ear
10. _____ Meniere's Disease
11. _____ Meningitis
12. _____ Metastasis
13. _____ Myasthenia Gravis
14. _____ Nephritis
15. _____ Neuritis
16. _____ Parkinson's Disease
17. _____ Poliomyelitis
18. _____ Sciatica
19. _____ Sarcoma
20. _____ Sycosis
21. _____ Tic Douloureux
22. _____ Thrombophlebitis

PART III - TRUE AND FALSE

Read each question carefully. If the statement is TRUE, place a T before it; if FALSE, place an F before it. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. Examples of medications that would stimulate the nervous system would be caffeine and dexedrine.

MASTER TEST

PART III - TRUE AND FALSE (CONT.)

_____ 2. Depressant medications are often habit-forming.

_____ 3. Medications that lower the pressure in the eyeball are called mydriatics.

_____ 4. One of the most common medications used to control convulsions is Dilantin.

_____ 5. Nupercaine and xylocaine are medications that produce general anesthesia.

_____ 6. Medications that are for the autonomic nervous systems are classified in groups that have direct opposite action.

MASTER TEST

PART II - SELECTION AND LISTING

In the spaces provided below, you are to list the six nervous and sensory medications you have selected. You should include one stimulant, one analgesic, one hypnotic, one ocal anesthetic, one anti-convulsant and one miotic giving the information required.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Stimulant			
2. Analgesic			
3. Hypnotic			
4. Local Anesthetic			
5. Anti-convulsant			
6. Miotic			

SCORE: ____________

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UPON COMPLETION OF
THE MASTER TEST

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NAME: ______________________ DATE: ______________

MEDICATIONS FOR THE RESPIRATORY SYSTEM

MASTER TEST

PART I - MULTIPLE CHOICE

Read each question carefully. Select the one best answer; then circle the letter in front of the answer.

1. Asthma is a condition of the respiratory system in which:
    - a. the lining of the bronchi is swollen.
    - b. the bronchi spasm, causing difficult breathing.
    - c. allergies frequently cause severe attacks.
    - d. all of the above.

2. The medication that is most commonly used for Asthma is:
    - a. Elixir of terpin hydrate.
    - b. Aminophylline.
    - c. Coramine.
    - d. Benadryl.

3. The action of an expectorant is to:
    - a. soothe the mucus membranes.
    - b. help the patient cough up secretions.
    - c. depress the cough reflex.
    - d. reduce pain.

4. Spirits of Ammonia is used for patients who have fainted because it stimulates:
    - a. the respiratory center of the brain.
    - b. the cough reflex.
    - c. lung cells to enlarge.
    - d. the heart to pump faster.

MASTER TEST

PART I - MULTIPLE CHOICE (CONT.)

5. A disorder of the lungs in which the air sacs (alveoli) are permanently distended is:
   a. known as Emphysema
   b. curable with proper treatment
   c. treated best in the hospital
   d. caused by overexercise

6. Whether from germs, allergies or irritants, if a person is suffering from a swelling of the lining of the nose, it is medically called:
   a. Sinusitis.
   b. Hay Fever.
   c. Cold.
   d. Rhinitis.

PART II - TRUE AND FALSE

Read through each statement carefully. Place a T in front of the statement if it is TRUE, and an F if it is FALSE. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. The major functions of the respiratory system are to bring oxygen into the body and carry it to every body cell.

_____ 2. Bronchodilators are medications that reduce swelling and cause relaxation in the respiratory system.

_____ 3. Chronic Obstructive Lung Disease is often related to smoking or breathing poluted air.

MASTER TEST

PART II - TRUE AND FALSE (CONT.)

_____ 4. Coramine is one of the most commonly used medications for a respiratory arrest.

_____ 5. Respiratory stimulants are frequently given by parenteral methods.

_____ 6. A medication, for the treatment of Emphysema, that can be given sublingually or by inhalation is Isuprel.

_____ 7. Patients who suffer from chronic Bronchitis usually benefit most from daily use of respiratory stimulants.

_____ 8. Nasal decongestants shrink mucous membranes and relieve nasal swelling.

_____ 9. Respiratory stimulants often cause drowsiness.

_____ 10. Trachea is another name for the voice box.

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the five respiratory medications you have selected. You should include at least one from every classification, giving the required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Respiratory Stimulant			
2. Cough mixture			
3. Bronchodilator			
4. Nasal decongestant			
5.			

SCORE: ____________

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UPON COMPLETION OF THE MASTER TEST

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MASTER TEST

PART I - MATCHING

Place the letter for the appropriate medication in Column II beside the circulatory disorder it best matches in Column I.

COLUMN I	COLUMN II
_____ 1. Anemia	A. Nitroglycerin (Vasodilator)
_____ 2. Angina Pectoris	B. Phenobarbital (Depressant)
_____ 3. Blood Clot	C. Feosol (Hematinic)
_____ 4. Irregular Heart Beat	D. Crystodigin (Cardiotonic)
_____ 5. Congestive Heart Failure	E. Catapres (Antihypertensive)
_____ 6. High Blood Pressure	F. Noctec (Hypnotic)
	G. Aminophylin (Bronchodilator)
	H. Coumadin (Anticoagulant)
	I. Inderal (Antiarrhythmic)

PART II - MULTIPLE CHOICE

Read each statement carefully. Select the one best answer, then circle the letter in front of the answer:

1. Medications that dilate blood vessels and lower the blood pressure are known as:
   a. Vasoconstrictors.
   b. Bronchodilators.
   c. Anticoagulants.
   d. Vasodilators.

2. All of the following are true of anticoagulants except they:
   a. can be administered orally or parenterally.
   b. slow down blood clotting.
   c. have little or no side-effects.
   d. all of the above.

3. An important side effect of antihypertensive drugs might be:
   a. elevated blood pressure.
   b. lowered blood pressure - below normal.
   c. homeostasis.
   d. moon face.

PART II - MULTIPLE CHOICE (CONT.)

4. Cardiotonics or heart stimulants are given to patients to:
    a. slow the heartbeat.
    b. improve heart function.
    c. strengthen the heartbeat.
    d. all of the above.

5. The functions of the circulatory system include:
    a. carrying oxygen to all cells.
    b. providing a pathway for sensory impulses.
    c. carrying wastes away from all cells.
    d. a and c.

6. Hematinics are medications for the circulatory system that:
    a. slow clotting time.
    b. dilate blood vessels.
    c. help clotting time.
    d. stimulate production of red blood cells and hemoglobin.

7. Medications that are given for the purpose of regulating the heart rate are:
    a. antiarhythmics.
    b. antiemetics.
    c. anticholesterols.
    d. antispasmodics.

8. A drug which might be used to improve the blood supply to the heart muscle is a(an):
    a. anticoagulant.
    b. diuretic.
    c. vasodilator.
    d. hematinic.

9. Circulatory medications that are called anticoagulants are those medications that:
    a. might be used to prevent blood clots.
    b. are used in treating hemorrhages.
    c. dilate the blood vessels.
    d. slow and strengthen the heart.

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the six circulatory medications you have selected. You should include at least one medication from each classification, giving the information required.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Cardiotonic			
2. Antiarrhythmic			
3. Vasodilator			
4. Anticoagulant			
5. Antihypertensive			
6. Hematinic			

SCORE: ____________

UPON COMPLETION OF
THE MASTER TEST

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NAME: ______________________________ DATE: ____________

MEDICATIONS FOR THE GASTROINTESTINAL SYSTEM

MASTER TEST

PART I - MATCHING

Place the letter of the description of drug action in Column II in the space before the drug classification it describes in Column I.

	COLUMN I		COLUMN II
_____	1. Antacid, Antiflatulant	A.	Act on nervous system to decrease gastric juices and slow motion of stomach and intestines
_____	2. Digestant	B.	Promote elimination of worms
_____	3. Antidiarrheal	C.	Neutralize stomach acid, stop gas formation
_____	4. Stimulant laxative	D.	Promote bowel action by increasing fluid in the intestine
_____	5. Antiemetic	E.	Stop diarrhea
_____	6. Anticholinergic	F.	aid in digestion
_____	7. Anthelmintic	G.	Increase bulk in the stool
_____	8. Bulk-producing laxative	H.	Combat nausea and vomiting
_____	9. Stool-softener laxative	I.	Irritate lining of the intestine
_____	10. Saline laxative	J.	Soften fecal material
		K.	Cause vomiting

MASTER TEST

PART II - TRUE AND FALSE

Read through each statement carefully. Place a T before the statement if it is TRUE and an F if it is FALSE. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. Antacids are more effective if given with meals.

_____ 2. Infectious hepatitis is not contagious from one person to another.

_____ 3. Cirrhosis of the liver is sometimes caused by alcoholism.

_____ 4. One function of the pancreas is to make substances used in digestion.

_____ 5. One function of the gastrointestinal system is to make and eliminate urine.

_____ 6. Good mouth care helps to prevent pyorrhea (gum infection).

_____ 7. Digestion means the breakdown of food into a form the body cells can use.

_____ 8. Most digestion takes place in the large intestine.

_____ 9. Irritable colon may cause bloating, cramping, diarrhea and constipation.

_____ 10. A person's diet has no effect on their bowel function.

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the seven gastrointestinal medications you have selected. You should include one antacid, one anticholinergic, one digestant, one bulk laxative, one stimulant laxative, one antiemetic, one antidiarrheal giving the required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Antacid, Antiflatulant			
2. Anticholinergic			
3. Digestant			
4. Antiemetic			
5. Bulk laxative			
6. Stimulant laxative			
7. Antidiarrheal			

SCORE: ____________

UPON COMPLETION OF THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.
2. If you passed the Master Test for this module, consult your schedule for the module you should start next.
3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.
4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MEDICATION FOR THE URINARY
AND
MALE REPRODUCTIVE SYSTEMS

A-9-16

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.
2. Go to the written testing area.
3. Turn to the next page.
4. Write your name and date on the proper spaces.
5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.
6. If the teacher calls time before you are finished, you must stop working.
7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________ DATE: ______________

MEDICATION FOR THE URINARY AND MALE REPRODUCTIVE SYSTEMS

MASTER TEST

PART I - TRUE AND FALSE

Read through each statement carefully. If the statement is TRUE place a T in the blank beside it. If the statement is FALSE place an F in the blank.

_____ 1. Cystitis is a common problem with patients who have catheters.

_____ 2. A kidney infection (Pyelonephritis) is not a serious disease.

_____ 3. When a person has chronic kidney failure drug dosages must be doubled to make them effective.

_____ 4. Diuretics frequently cause the body to lose too much potassium.

_____ 5. Benign prostatic enlargement is a rare condition involving the kidney tubules.

_____ 6. Urinary antiseptics act in the urinary tract to destroy or prevent growth of bacteria.

_____ 7. Cranberry juice helps to stop the growth of bacteria in the urinary tract.

_____ 8. Estrogens are female hormones.

_____ 9. When drugs are given to treat a kidney or bladder infection fluids should be limited.

_____ 10. Cancer of the prostate is caused by a poor diet.

MASTER TEST

PART II - MULTIPLE CHOICE

Read each question carefully. Select the one best answer, then circle the letter in front of that answer.

1. Cystitis is a condition in which the patient may have:
   a. burning during urination.
   b. frequent, small amounts of urine passed.
   c. chills and fever.
   d. all of the above.
2. A disorder of the male reproductive system characterized by difficult, painful urination is:
   a. impotence.
   b. prostatic enlargement.
   c. colitis.
   d. endocarditis
3. An infection of the kidney causing chills, fever, nausea, and pus in the urine is:
   a. pyelonephritis.
   b. gastritis.
   c. nephrosis.
   d. cryptorchism.
4. A medication used for a person with advanced cancer of the prostate is:
   a. Oreton (androgen).
   b. Stilbesterol (estrogen).
   c. Lasix (diuretic).
   d. Keflex (anti-infective).
5. Urinary system medications given to treat edema are called:
   a. emetics.
   b. diuretics.
   c. antiseptics.
   d. androgens.

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the four urinary medications and one male reproductive medication you have selected. You should include at least two diuretics one urinary antiseptics, one systemic anti-infective and one androgen or estrogen, giving the required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Diuretic			
2. Diuretic			
3. Urinary Antiseptic			
4. Systemic Anti-infective			
5. Androgen or Estrogen (circle)			

SCORE: ____________

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UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities for this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MEDICATION FOR THE ENDOCRINE
AND
FEMALE REPRODUCTIVE SYSTEMS

A-9-17

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.
2. Go to the written testing area.
3. Turn to the next page.
4. Write your name and date on the proper spaces.
5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.
6. If the teacher calls time before you are finished, you must stop working.
7. Take your test to your teacher or grade it, according to instructions.

NAME: ____ DATE: _________________

MEDICATIONS FOR THE ENDOCRINE AND FEMALE REPRODUCTIVE SYSTEMS

MASTER TEST

PART I - MATCHING

Place the letter from the classifications of endocrine and female reproductive system medications listed in Column II beside the medication it best matches in Column I.

COLUMN I

_____ 1. Synthroid (levothyroxine)
_____ 2. Provera
_____ 3. Insulin
_____ 4. Enovid (estrogen, testosterone)
_____ 5. Oreton (testosterone)
_____ 6. Deltasone (prednisone)
_____ 7. Orinase (tolbutamide)

COLUMN II

A. Adrenal hormone
B. Pituitary hormone
C. Thyroid preparation
D. Oral hypoglycemic
E. Androgen preparation
F. Progesteron preparation
G. Islets of Langerhans secretion
H. Estrogen preparation
I. Oral contraceptive

PART II - TRUE AND FALSE

Read through each statement carefully. Place a T in front of the statement if it is TRUE and and F if it is FALSE. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. If a non-pregnant woman notices oozing from the breast, a lump, enlargement or "dimpling", she might have chronic mastitis.

_____ 2. Hyperthyroidism is a disease in which the patient is overactive, has a rapid pulse, is thin, has a voracious appetite, may have bulging eyes, sleeplessness, difficulty swallowing and a possible swollen neck.

MASTER TEST

PART II - TRUE AND FALSE (CONT.)

_____ 3. The major function of the endocrine system is that of chemically regulating the human body.

_____ 4. A whitish vaginal discharge with odor, burning or itching of the genitals may indicate that a woman has vaginitis.

_____ 5. A disorder characterized by excessive thirst, itchy, dry skin, weight loss, large amount of urination, tendency to boils, and sugar in the urine is known as Diabetes Mellitus.

_____ 6. A disorder in which the patient has a tendency to sluggishness physically and mentally, is overweight, especially in the shoulders and abdomen, has dry skin, coarse hair that tends to fall out and may be chronically constipated with a low rate of burning calories is called hypothyroidism.

_____ 7. Depression, menstrual irregularities, plus alternating periods of heat and cold felt by the patient are the symptoms of a. condition known as displaced uterus.

_____ 8. Addison's Disease is a disorder of the endocrine system that is characterzied by dehydration, weight loss, bronze colored skin, thinning hair, anemia and possible tremors.

_____ 9. Producing hormones for physical and mental stability, providing a place for conception and menstruation are the major functions of the female reproductive system.

_____ 10. Although usually a normal process of the female body, if labor for delivery of a baby is difficult, the disorder is called dystocia.

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the five endocrine and female reproductive medications you have selected. You should include one pituitary hormone, one thyroid medication, one adrenal hormone, one antidiabetic medication and one female hormone, giving the required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Pituitary Hormone			
2. Thyroid Hormone			
3. Adrenal Hormone			
4. Antidiabetic			
5. Estrogen or Progesterone (circle)			

SCORE: ____________

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.

2. Go to the written testing area.

3. Turn to the next page.

4. Write your name and date on the proper spaces.

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________ DATE: ______________

MEDICATIONS FOR THE SKIN

MASTER TEST

PART I - MATCHING

Place the letter of the actions described in Column II in the space beside the drug classification in Column I it best describes.

COLUMN I

_____ 1. Local Anti-infectives
_____ 2. Scabicide
_____ 3. Pediculicide
_____ 4. Anti-inflammatory Medication
_____ 5. Antipruritic
_____ 6. Protectant
_____ 7. Debridement Agent

COLUMN II

A. Destroys dead tissue
B. Relieves swelling, redness, pain
C. Increases pain
D. Stops itching
E. Kills scabies mites
F. Contain antibiotics or anti-fungal agents
G. Removes discoloration, such as bruises
H. Kills lice
I. Protects and covers skin

MASTER TEST

PART II - TRUE AND FALSE

Read the following statements carefully. If a statement is TRUE, place T in the preceding blank. If it is FALSE, place an F in the blank and underline the word or words that make it false.

_____ 1. Urticaria is also called hives.

_____ 2. One function of the skin is to absorb oxygen from the air.

_____ 3. Athlete's Foot is caused by a fungus.

_____ 4. Petrolatum (Vaseline) is an anti-infective drug.

_____ 5. Debridement medications are used on decubitus ulcers to remove dead tissue.

_____ 6. Medications used on the skin have few side effects.

_____ 7. Anti-inflammatory medications contain corticosteroids and reduce the symptoms of inflammation.

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the five skin medications you have selected. You should include at least one from every classification, giving the required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Local Anti-infective			
2. Scabicide or Pediculicide			
3. Anti-inflammatory skin medication			
4. Antipruritic			
5. Protectant			
6. Debridement Medication			

SCORE: ____________

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UPON COMPLETION OF THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.
2. If you passed the Master Test for this module, consult your schedule for the module you should start next.
3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.
4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MEDICATIONS FOR
INFLAMMATION, INFECTION, AND IMMUNITY

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.

2. Go to the written testing area.

3. Turn to the next page.

4. Write your name and date on the proper spaces.

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________ DATE: ______________

MEDICATIONS FOR INFLAMMATION,
INFECTION AND IMMUNITY

MASTER TEST

PART I - MATCHING

Place the letter of the classifications in Column II beside the medication(s) or preparation(s) it best matches in Column I. The letters in Column II may be used more than once.

COLUMN I

_____ 1. Zephiran
_____ 2. Penicillin
_____ 3. Immune Serum Globulin
_____ 4. Deltasone (prednisolone)
_____ 5. Gantrisin (sulfasoxazole)
_____ 6. Keflex (cephalexin)
_____ 7. Tetanus Toxoid
_____ 8. Terramycin (tetracycline)
_____ 9. Ethyl Alcohol
_____ 10. Decadron (dexamethasone)
_____ 11. E.E.S. (erythromycin)
_____ 12. Betadine

COLUMN II

A. Anti-inflammatory
B. Antiseptic
C. Disinfectant
D. Antibiotic
E. Sulfonamide
F. Active Acquired Immunity Preparation
G. Passive Acquired Immunity Preparation

MASTER TEST

PART II - MULTIPLE CHOICE

Read each question carefully. Select the one best answer, then circle the letter in front of that answer.

1. A process of the human body in which germs are not able to destroy body cells because of protective substances called antibodies is called:
    a. inflammation.
    b. immunity.
    c. metabolism.
    d. infection.

2. Influenza and Strep Throat are both conditions of the body that are known as:
    a. inflammations.
    b. antibodies.
    c. infections.
    d. antibiotics.

3. Two conditions that are true inflammations would be:
    a. Cystitis and Nephrosis.
    b. Rhinitis and asthma.
    c. Vaginitis and Cryptorchism.
    d. Dermatitis and Colitis.

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MASTER TEST

PART II - MULTIPLE CHOICE (CONT.)

4. An infection is a body process that involves:

   a. invading germs.
   b. fighting white blood cells.
   c. formation of pus.
   d. all of the above.

5. A body process that is characterized by redness, swelling, heat and pain and is caused by injury, irritation or germs is known as:

   a. immunity.
   b. irrigation.
   c. inflammation.
   d. infection.

6. Tetanus Toxiod gives active immunity. This means that:

   a. the body is stimulated to produce its own immunity.
   b. the serum itself provides the immunity or antibodies.
   c. the immunity lasts only 2 - 4 weeks.
   d. the body will be immune to several different diseases.

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the five medications or preparations you have selected. You should include at least three for infection, one anti-inflammatory and one for immunity giving required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Anti-infective			
2. Anti-infective			
3. Anti-infective			
4. Anti-inflammatory			
5. Immunity Providing Medication			

SCORE: ____________

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.

2. Go to the written testing area.

3. Turn to the next page.

4. Write your name and date on the proper spaces.

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________ DATE: ____________

MEDICATIONS FOR NUTRITIONAL DEFICIENCIES

MASTER TEST

PART I - MATCHING

Place the letter of the information in Column II beside the nutritional deficiency in Column I it best matches.

COLUMN I

____ 1. Pernicious Anemia
____ 2. Iron Deficiency Anemia
____ 3. Rickets
____ 4. Osteoporosis
____ 5. Scurvy
____ 6. Hypokalemia
____ 7. Dehydration
____ 8. Beriberi
____ 9. Pellagra

COLUMN II

A. iodine deficiency
B. in children causes bowed legs, soft bones
C. causes positive clinitest reaction
D. vitamin C deficiency
E. might be caused by blood loss
F. porous, easily broken bones in adults
G. vitamin B_1 (Thiamine) deficiency
H. prevented by adequate fluid intake
I. tetany
J. vitamin B_3 (niacin) deficiency
K. might result from diuretics
L. body cannot absorb Vitamin B_{12} in the stomach

PART II - TRUE AND FALSE

Read through each statement carefully. Place a T before the statement if it is TRUE and an F if it is FALSE. If you mark a statement FALSE, underline the word or phrase that makes it false.

_____ 1. Carbohydrates help regulate body processes.

_____ 2. Fats build and repair body tissues.

_____ 3. Vitamin C is found in citrus fruits.

_____ 4. A good source of iron is meat.

_____ 5. Water is important for all body functions.

_____ 6. If a person does not receive enough vitamins and minerals his health will be impaired.

_____ 7. A person with pernicious anemia must receive iron injections the rest of his life.

_____ 8. Most vitamins are given parenterally.

_____ 9. A frequent side effect of oral iron medications is black stools.

_____ 10. Potassium medications such as K-Lyte and Kaon should be given with a full glass of water.

_____ 11. It is not important for a geriatric patient to have a well-balanced, adequate diet.

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MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list the five nutritional deficiency medications you have selected. You should include at least three vitamins and two minerals giving required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1.			
2.			
3.			
4.			
5.			

SCORE: ____________

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UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities in this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 30 minutes.
2. Go to the written testing area.
3. Turn to the next page.
4. Write your name and date on the proper spaces.
5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.
6. If the teacher calls time before you are finished, you must stop working.
7. Take your test to your teacher or grade it, according to instructions.

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NAME: ________________________________ DATE: ______________

MEDICATIONS FOR ALLERGIC REACTIONS, MOTION SICKNESS AND MALIGNANT DISEASES

MASTER TEST

PART I - MULTIPLE CHOICE

Read each question carefully. Select the one best answer and circle the letter in front of it.

1. An allergic reaction is the body's response to an:
   a. antihistamine.
   b. allergan.
   c. emetic.
   d. allotropic.

2. Allergic reactions might be caused by:
   a. foods.
   b. weeds.
   c. drugs.
   d. all of the above.

3. The most distressing symptoms of motion sickness are:
   a. nausea and vomiting.
   b. headache and fatigue.
   c. drowsiness and dry mouth.
   d. loss of hair and staggering gait.

4. When cancer metastasizes it:
   a. reproduces in an orderly way.
   b. does not invade other tissues.
   c. spreads to a different location through the blood or lymphatic system.
   d. decreases in size.

5. The actual cause of cancer is:
   a. smoking.
   b. poor diet.
   c. exposure to sunlight.
   d. unknown.

6. Chemotherapy refers to treatment using:
   a. surgery.
   b. x-ray.
   c. drugs.
   d. cobalt.

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MASTER TEST

PART I - MULTIPLE CHOICE (CONT.)

7. A person receiving an antihistamine might be advised not to drive a car because:
   a. drowsiness is a frequent side effect.
   b. the drug would cause disorientation.
   c. loss of sensation in the hands and feet frequently occurs.
   d. any person receiving any medication should avoid driving a car.

8. Antiemetic drugs are used to:
   a. treat and prevent hypertension.
   b. treat and prevent confusion.
   c. treat and prevent nausea and vomiting.
   d. kill or slow growth of neoplasms.

9. The most common side effects of antineoplastic drugs are:
   a. nausea and vomiting.
   b. cardiac arrest and chest pain.
   c. congenital anomalies.
   d. increase in red and white cell count.

10. Allergic reactions, motion sickness, and malignant diseases are individualistic conditions that:
    a. are all caused by virus infections.
    b. cause similar reactions in every individual.
    c. depend on body sensitivity and defenses.
    d. are the body's response to aging.

MASTER TEST

PART II - TRUE AND FALSE

Read each question carefully. If the statement is TRUE, place a T before it; if FALSE, place an F before it.

_____ 1. A person might be allergic to a medication he is taking.

_____ 2. Some antiemetic drugs are also antihistamines.

_____ 3. Loss of hair and vomiting are frequent side effects of antiemetics.

_____ 4. A person receiving antneoplastic drugs must be watched carefully for undesirable effects.

_____ 5. A benign tumor and a malignant tumor are the same thing.

_____ 6. Smoking increases the risk of developing cancer.

_____ 7. A carcinogen is a substance that kills or slows the growth of cancer cells.

_____ 8. Persons receiving methotrexate should avoid exposure to sunlight.

_____ 9. Hormones such as estrogens and testosterone may help to relieve pain in advanced prostatic and breast cancer.

_____ 10. Histamine produced by the body causes the symptoms of an allergic reaction.

PART III - COMPLETION

Answer the following questions in the blanks provided.

1. List three of the seven warning signals of cancer.

   a. ____

   b. ____

   c. ____

2. List three symptoms or signs you might observe in a patient with an allergic reaction.

   a. ____

   b. ____

   c. ____

3. A person with motion sickness would complain of:

   a. ____

   b. ____

MASTER TEST

PART III - SELECTION AND LISTING

In the spaces provided below, you are to list one medication each for allergic reactions, motion sickness and malignant diseases. The other two may be any of the three. Give all the required information.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Antihistamine			
2. Antiemetic			
3. Antineoplastic			
4.			
5.			

SCORE: ____________

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UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you *did not pass* the Master Test and have not gone through the module, go back and do all the activities for this module.

4. If you *did not pass* the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. This test is a written test which you will take in a traditional testing area and complete in not more than 35 minutes.

2. Go to the written testing area.

3. Turn to the next page.

4. Write your name and date on the proper spaces.

5. When told to begin, answer the questions in pen or pencil. If you wish to change an answer, completely mark out the first one and mark your new answer clearly.

6. If the teacher calls time before you are finished, you must stop working.

7. Take your test to your teacher or grade it, according to instructions.

NAME: ______________________________________ DATE: ________________

MEDICATIONS FOR MENTAL AND/OR EMOTIONAL STRESS

MASTER TEST

PART I - TRUE AND FALSE

Read each question carefully. If the statement is TRUE, place a T before it; if FALSE, place an F before it.

_____ 1. Human behavior is aimed at filling a person's physical and emotional needs.

_____ 2. Childhood experiences have no effect on a person's personality.

_____ 3. Well-adjusted people never experience stress.

_____ 4. Rationalization is not a constructive way of dealing with stress.

_____ 5. Stress caused by illness might make a person want to regress and be child-like.

_____ 6. Psychosis is a major mental disorder where a person loses touch with reality.

_____ 7. Blaming others for your behavior is a healthy way to avoid stress.

_____ 8. Organic Brain Syndrome might be caused by poor circulation in the brain.

_____ 9. A person with a neurosis is unable to live a normal life because of his emotional condition.

_____ 10. Physical reactions to stress might include increased blood pressure and loss of appetite.

MASTER TEST

PART II - MATCHING

Place the letter of the drug classification in Column II beside the word or phrase in Column I which it matches. The letters may be used more than once.

COLUMN I

_____ 1. Librium (chlordiazepoxide)
_____ 2. Acts to prevent extreme mood changes
_____ 3. Cerespan (papaverine)
_____ 4. Elavil
_____ 5. Given to increase the blood supply to the brain.
_____ 6. Lithium
_____ 7. Helps control extreme behavior but does not affect the cause of the behavior
_____ 8. Acts to increase activity and reduce depression
_____ 9. Reduces anxiety without causing sleep

COLUMN II

A. Antidepressant
B. Antianxiety Drug (Minor tranquilizer)
C. Antipsychotic Drug (Major tranquilizer)
D. Mood Stabilizer
E. Vasodilator

PART III - COMPLETION

1. Three events which might cause stress are:
   a. ______________________________
   b. ______________________________
   c. ______________________________
2. Three things wich might cause Organic Brain Syndrome are:
   a. ______________________________
   b. ______________________________
   c. ______________________________

MASTER TEST

PART IV - SELECTION AND LISTING

In the spaces provided below, you are to list the five medications you have selected. List one medication for each classification including trade name, chief action, and side and/or toxic effects.

Classification	Trade Name	Chief Action	Side and/or Toxic Effects
1. Antidepressant			
2. Antianxiety Drug (Minor Tranquilizer)			
3. Antipsychotic Drug (Major Tranquilizer)			
4. Mood Stabilizer			
5. Vasodilator			

SCORE: ____________

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. Check your answers for the Master Test with the teacher, or wait to have it graded.

2. If you passed the Master Test for this module, consult your schedule for the module you should start next.

3. If you did not pass the Master Test and have not gone through the module, go back and do all the activities for this module.

4. If you did not pass the Master Test, but have gone through the module, see your teacher.

MASTER TEST

INSTRUCTIONS

1. Inform your teacher you are ready for the Master Test and sign up on the appropriate schedule (you are responsible for being present at the proper location at the right time).

2. This test consists of four (4) parts:
    a. prepare a unit-dose of oral medication,
    b. prepare a solid oral medication from a multiple dose container,
    c. prepare a liquid or powder oral medication from a multiple dose container, and
    d. prepare an oral medication that is a controlled drug.

3. A check list for each part of the test is provided in this booklet. Write your name on each one.

4. When you go to the test area, turn the booklet to page 154 and give it to your teacher.

5. Your teacher will have you draw for each medication you are to prepare. You will prepare them one at a time. (The medications will be from any one of the four situations of the laboratory assignment.)

NAME: ______________________________ DATE: ______________

CHECK ONE: ☐ Unit-Dose ☐ Multiple-Liquid

☐ Multiple-Solid ☐ Controlled/Narcotic

MEDICATION PREPARATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies medication order (using method given) with doctor's orders or patient's chart.
_____	_____	2. Adheres to limitations of medications able to prepare.
_____	_____	3. Obtains medication key (and control book, if indicated) and unlocks medication area.
_____	_____	4. Washes hands according to proper technique (30 second wash).
_____	_____	5. Selects correct container of medication.
_____	_____	6. Verifies label for type and dosage of medication.
_____	_____	7. Opens container and pours medication correctly for type ordered.
_____	_____	8. Verifies (poured) medication with medication order.
_____	_____	9. Closes container properly and verifies third time.
_____	_____	10. Records narcotics or controlled drugs properly (verifies drug count*).
_____	_____	11. Stores medication properly (for type).
_____	_____	12. Alters state of medication properly.*

* if applicable

MEDICATION PREPARATION
MASTER TEST

CHECK LIST

U S

_____ _____ 13. Obtains any additional equipment necessary to administer medication.*

_____ _____ 14. Locks or secures medication area when finished.

_____ _____ 15. Cleans up preparation area.

_____ _____ 16. Maintains medical asepsis throughout task.

_____ _____ 17. Sequences steps of medication preparation correctly.

_____ _____ 18. Meets time limit.

* if applicable

SCORE: ______________

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NAME: ______________________________ DATE: ____________

CHECK ONE:
☐ Unit-Dose ☐ Multiple-Liquid
☐ Multiple-Solid ☐ Controlled/Narcotic

MEDICATION PREPARATION
MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies medication order (using method given) with doctor's orders or patient's chart.
_____	_____	2. Adheres to limitations of medications able to prepare.
_____	_____	3. Obtains medication key (and control book, if indicated) and unlocks medication area.
_____	_____	4. Washes hands according to proper technique (30 second wash).
_____	_____	5. Selects correct container of medication.
_____	_____	6. Verifies label for type and dosage of medication.
_____	_____	7. Opens container and pours medication correctly for type ordered.
_____	_____	8. Verifies (poured) medication with medication order.
_____	_____	9. Closes container properly and verifies third time.
_____	_____	10. Records narcotics or controlled drugs properly (verifies drug count*).
_____	_____	11. Stores medication properly (for type).
_____	_____	12. Alters state of medication properly.*

* if applicable

MEDICATION PREPARATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	13. Obtains any additional equipment necessary to administer medication.*
_____	_____	14. Locks or secures medication area when finished.
_____	_____	15. Cleans up preparation area.
_____	_____	16. Maintains medical asepsis throughout task.
_____	_____	17. Sequences steps of medication preparation correctly.
_____	_____	18. Meets time limit.

* if applicable

SCORE: ______________

NAME: ______________________________ DATE: ______________

CHECK ONE: ☐ Unit-Dose ☐ Multiple-Liquid
☐ Multiple-Solid ☐ Controlled/Narcotic

MEDICATION PREPARATION
MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies medication order (using method given) with doctor's orders or patient's chart.
_____	_____	2. Adheres to limitations of medications able to prepare.
_____	_____	3. Obtains medication key (and control book, if indicated) and unlocks medication area.
_____	_____	4. Washes hands according to proper technique (30 second wash).
_____	_____	5. Selects correct container of medication.
_____	_____	6. Verifies label for type and dosage of medication.
_____	_____	7. Opens container and pours medication correctly for type ordered.
_____	_____	8. Verifies (poured) medication with medication order.
_____	_____	9. Closes container properly and verifies third time.
_____	_____	10. Records narcotics or controlled drugs properly (verifies drug count*).
_____	_____	11. Stores medication properly (for type).
_____	_____	12. Alters state of medication properly.*

* if applicable

MEDICATION PREPARATION

MASTER TEST

CHECK LIST

U S

_____ _____ 13. Obtains any additional equipment necessary to administer medication.*

_____ _____ 14. Locks or secures medication area when finished.

_____ _____ 15. Cleans up preparation area.

_____ _____ 16. Maintains medical asepsis throughout task.

_____ _____ 17. Sequences steps of medication preparation correctly.

_____ _____ 18. Meets time limit.

* if applicable

SCORE: _______________

NAME: ______________________________ DATE: ______________

CHECK ONE:
☐ Unit-Dose ☐ Multiple-Liquid
☐ Multiple-Solid ☐ Controlled/Narcotic

MEDICATION PREPARATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies medication order (using method given) with doctor's orders or patient's chart.
_____	_____	2. Adheres to limitations of medications able to prepare.
_____	_____	3. Obtains medication key (and control book, if indicated) and unlocks medication area.
_____	_____	4. Washes hands according to proper technique (30 second wash).
_____	_____	5. Selects correct container of medication.
_____	_____	6. Verifies label for type and dosage of medication.
_____	_____	7. Opens container and pours medication correctly for type ordered.
_____	_____	8. Verifies (poured) medication with medication order.
_____	_____	9. Closes container properly and verifies third time.
_____	_____	10. Records narcotics or controlled drugs properly (verifies drug count*).
_____	_____	11. Stores medication properly (for type).
_____	_____	12. Alters state of medication properly.*

* if applicable

MEDICATION PREPARATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	13. Obtains any additional equipment necessary to administer medication.*
_____	_____	14. Locks or secures medication area when finished.
_____	_____	15. Cleans up preparation area.
_____	_____	16. Maintains medical asepsis throughout task.
_____	_____	17. Sequences steps of medication preparation correctly.
_____	_____	18. Meets time limit.

* if applicable

SCORE: ______________

UPON COMPLETION OF THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.
2. If you passed the test, check the schedule for the module or area of study you are to take next.
3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

MASTER TEST

INSTRUCTIONS

1. Inform your teacher you are ready for the Master Test and sign up on the appropriate schedule (you are responsible for being present at the proper location at the right time).

2. Bring your partner or another classmate to be your "patient" when you take the test.

3. This test consists of two (2) parts:
    a. administer an oral medication 1 of 4 possible standard medication administration situations.
    b. administer an oral medication in 1 of 4 possible altered medication administration situations.

4. A check list for each part of the test is provided in this booklet. Write your name on each one.

5. When you go to the test area, turn the booklet to page 164 and give it to your teacher.

6. Your teacher will have you draw for each situation. You will administer them one at a time. (The situations will be from the laboratory assignments.)

NAME: ______________________________ DATE: ______________

CHECK ONE: ☐ STANDARD SITUATION ☐ ALTERED SITUATION

MEDICATION ADMINISTRATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Checks to make certain all supplies and equipment are present for administration of medication.
_____	_____	2. Checks to make certain medication area is locked or secured.
_____	_____	3. Washes hands according to the proper technique.
_____	_____	4. Takes medication by proper method to correct patient unit.
_____	_____	5. Identifies patient and verifies medication for type, dosage, mode of administration and time.
_____	_____	6. Communicates with the patient.
_____	_____	7. Takes care of any prior needs patient may have (if applicable).
_____	_____	8. Positions patient to take medication if indicated.
_____	_____	9. Administers medications correctly for mode of administration. Assists patient if indicated.
_____	_____	10. Observes patient before, during, and after administration of medication.
_____	_____	11. Makes patient comfortable and gives call bell after administration of medication.

MEDICATION ADMINISTRATION

MASTER TEST

CHECK LIST

U S

_____ _____ 12. Returns to medication area and cleans properly.

_____ _____ 13. Proceeds correctly if unable to administer medication.

_____ _____ 14. Maintains medical asepsis throughout task.

_____ _____ 15. Records medication and observation correctly.

_____ _____ 16. Sequences steps correctly for administration of medication.

_____ _____ 17. Meets the time limit (if applicable).

_____ _____ 18. Maintains 100% accuracy on check list.

SCORE: _______________

NAME: ______________________________ DATE: ______________

CHECK ONE: ☐ STANDARD SITUATION ☐ ALTERED SITUATION

MEDICATION ADMINISTRATION
MASTER TEST

CHECK LIST

U	S	
____	____	1. Checks to make certain all supplies and equipment are present for administration of medication.
____	____	2. Checks to make certain medication area is locked or secured.
____	____	3. Washes hands according to the proper technique.
____	____	4. Takes medication by proper method to correct patient unit.
____	____	5. Identifies patient and verifies medication for type, dosage, mode of administration and time.
____	____	6. Communicates with the patient.
____	____	7. Takes care of any prior needs patient may have (if applicable).
____	____	8. Positions patient to take medication if indicated.
____	____	9. Administers medications correctly for mode of administration. Assists patient if indicated.
____	____	10. Observes patient before, during, and after administration of medication.
____	____	11. Makes patient comfortable and gives call bell after administration of medication.

MEDICATION ADMINISTRATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	12. Returns to medication area and cleans properly.
_____	_____	13. Proceeds correctly if unable to administer medication.
_____	_____	14. Maintains medical asepsis throughout task.
_____	_____	15. Records medication and observation correctly.
_____	_____	16. Sequences steps correctly for administration of medication.
_____	_____	17. Meets the time limit (if applicable).
_____	_____	18. Maintains 100% accuracy on check list.

SCORE: _______________

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.

2. If you passed the test, check the schedule for the module or area of study you are to take next.

3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

MASTER TEST

INSTRUCTIONS

1. Sign up on the appropriate schedule for the Master Test.

2. Select a partner from the list of persons available at the time of your testing. (You are responsible for being present for your testing, with your partner, at the proper time and location.)

3. This test consists of two (2) parts:
   a. perform 1 of 2 possible situations for a routine count of Schedule II and III controlled drugs and verify the count,

   b. Perform an alteration of 1 of 2 possible situations in counting controlled drugs in which there is an error, correct the error and verify the count.

4. A check list for each part of the test is provided in this booklet. Write your name on each one.

5. When you go to the test area, turn the booklet to page 170 and give it to your teacher.

6. You will draw for the situation you are to perform. You will perform the routine situation first. Upon successful completion of that situation, you will immediately perform the alteration of that situation.

NAME: ______________________________ DATE: _____________

CHECK ONE: ☐ Routine Count ☐ Altered Count

SCHEDULE II & III CONTROLLED DRUGS
MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Obtains proper equipment for counting medication
_____	_____	2. Procures qualified assistance for count.
_____	_____	3. Unlocks medication area correctly.
_____	_____	4. Washes hands according to proper technique.
_____	_____	5. Identifies medications correctly for each one counted.
_____	_____	6. Counts medication correctly according to method used on form of medication.
_____	_____	7. Verifies each medication counted with partner.
_____	_____	8. Re-affirms count.
_____	_____	9. If error re-counts medication and gives second count.*
_____	_____	10. Checks sign out record for possible errors.*
_____	_____	11. Checks doctor's orders and medication sheets in order to locate error.*
_____	_____	12. Corrects error in proper manner.*
_____	_____	13. Verifies and/or reports correct count on written form.

* if applicable

NAME: ______________________________ DATE: _____________

CHECK ONE: ☐ Routine Count ☐ Altered Count

SCHEDULE II & III CONTROLLED DRUGS
MASTER TEST

CHECK LIST

U	S	
_____	_____	14. Reports to superior if unable to resolve error.*
_____	_____	15. Locks facilities and tidies medication area.
_____	_____	16. Sequences steps of task correctly.
_____	_____	17. Maintains medicatal asepsis throughout task.
_____	_____	18. Meets time limits.*
_____	_____	19. Maintain 100% accuracy on check list.

* if applicable

SCORE: _______________

IF SUCCESSFUL, GO TO NEXT PAGE

NAME: ______________________________ DATE: ______________

CHECK ONE: ☐ Routine Count ☐ Altered Count

SCHEDULE II & III CONTROLLED DRUGS
MASTER TEST

CHECK LIST

U	S	
____	____	1. Obtains proper equipment for counting medication
____	____	2. Procures qualified assistance for count.
____	____	3. Unlocks medication area correctly.
____	____	4. Washes hands according to proper technique.
____	____	5. Identifies medications correctly for each one counted.
____	____	6. Counts medication correctly according to method used on form of medication.
____	____	7. Verifies each medication counted with partner.
____	____	8. Re-affirms count.
____	____	9. If error re-counts medication and gives second count.*
____	____	10. Checks sign out record for possible errors.*
____	____	11. Checks doctor's orders and medication sheets in order to locate error.*
____	____	12. Corrects error in proper manner.*
____	____	13. Verifies and/or reports correct count on written form.

* if applicable

NAME: ______________________________ DATE: ______________

CHECK ONE: ☐ Routine Count ☐ Altered Count

SCHEDULE II & III CONTROLLED DRUGS
MASTER TEST

CHECK LIST

U	S	
		14. Reports to superior if unable to resolve error.*
		15. Locks facilities and tidies medication area.
		16. Sequences steps of task correctly.
		17. Maintains medicatal asepsis throughout task.
		18. Meets time limits.*
		19. Maintain 100% accuracy on check list.

* if applicable

SCORE: ______________

IF SUCCESSFUL, GO TO NEXT PAGE

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UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.

2. If you passed the test, check the schedule for the module or area of study you are to take next.

3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

MASTER TEST

INSTRUCTIONS

1. Inform your teacher that you are ready for the Master Test and sign up on the appropriate schedule. (You are responsible for being present at the proper location at the right time.)

2. This test consists of two (2) parts:
    a. application of topical medication for a patient in 1 of 4 possible routine situations;

    b. application of a topical medication for a patient in an alteration of the selected situtation.

3. A check list for each part of the test is provided in this booklet. Write your name on each one.

4. When you go to the test area, turn the booklet to page 176 and give it to your teacher.

5. You will draw for the situations you are to perform.

NAME: ______________________________ DATE: ____________

ROUTINE TOPICAL APPLICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or
_____	_____	2. Obtains keys for medication area and unlocks.
_____	_____	3. Washes hands before proceeding.
_____	_____	4. Verifies label of medication with medication card or Kardex.*
_____	_____	5. Assembles appropriate supplies and/or equipment for topical application (enough for 2 applications).
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Verifies medication at bedside.*
_____	_____	9. Prepares patient as needed for topical application before proceeding.
_____	_____	10. Maintains medical asepsis throughout topical application.
_____	_____	11. Observes patient before, during and after topical application.
_____	_____	12. Applies topical medication correctly.*
_____	_____	13. Maintains safety factors for patient during and after task.*

* if applicable

ROUTINE TOPICAL APPLICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	14. Makes patient comfortable after application.
_____	_____	15. Cleans up patient area after application.
_____	_____	16. Records and/or reports application accurately with observations.*
_____	_____	17. Recognizes limitations in regard to application of topical medication.*
_____	_____	18. Completes application within proper time span.*

* SCORE: ________________

(others) SCORE: ________________

IF SATISFACTORY GO ON TO THE NEXT PAGE.

NAME: ______________________________ DATE: ____________

ALTERED TOPICAL APPLICATION
MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Washes hands before proceeding.
_____	_____	3. Verifies medication at bedside.*
_____	_____	4. Prepares patient as needed for topical application before proceeding.*
_____	_____	5. Adjusts task to meet needs of patient.*
_____	_____	6. Maintains medical asepsis throughout topical application.
_____	_____	7. Observes patient before, during and after topical application.
_____	_____	8. Applies topical medication correctly.*
_____	_____	9. Maintains safety factors for patient during and after task.*
_____	_____	10. Makes patient comfortable after application.
_____	_____	11. Cleans up patient area after application.
_____	_____	12. Records and/or reports application of topical medication.*
_____	_____	13. Recognizes limitations in regard to application of topical medication.*

TOTAL * POINTS: ____________________

TOTAL OTHER POINTS: ____________________

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.

2. If you passed the test, check the schedule for the module or area of study you are to take next.

3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

MASTER TEST

INSTRUCTIONS

1. Sign up on the appropriate schedule for the Master Test.

2. If you are to use a student partner as a patient, select a partner from the list of persons available at the time of your testing. (You are responsible for being present for your testing, with your partner, if indicated, at the proper time and place.)

3. This test consists of two (2) parts:
    a. perform 1 of 2 possible routine eye instillations and chart what you did and observe accurately;

    b. immediately upon successful completion of an eye instillation, you will perform an alteration of that situation.

4. A check list for each part of the test is provided in this booklet. Write your name on each one.

5. When you go to the test area, turn the booklet to page 182 and give it to your teacher.

6. When you perform the eye insitllations your teacher will have you draw for the situations you are to perform.

NAME: ______________________________ DATE: ______________

☐ Routine Eye Instillation ☐ Altered Eye Instillation

INSTILLATION OF EYE MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area.
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label of medication with medication card or Kardex.*
_____	_____	5. Assembles any additional appropriate supplies on medication tray.
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Alters task to meet needs of patient (if applicable).*
_____	_____	9. Prepares patient, as needed for eye instillation.
_____	_____	10. Verifies medication at bedside.*
_____	_____	11. Maintains medical asepsis during eye instillation.*
_____	_____	12. Observes patient during eye instillation.*
_____	_____	13. Instills eye medication correctly.*
_____	_____	14. Sequences steps of task for best performance

NAME: ______________________ DATE: ____________

☐ Routine Eye Instillation ☐ Altered Eye Instillation

INSTILLATION OF EYE MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	15. Maintains safety factors for patient.*
_____	_____	16. Makes patient comfortable after application.
_____	_____	17. Cleans up after eye instillation.
_____	_____	18. Recognizes limitations in regard to instillation or related tasks (if applicable).*
_____	_____	19. Records and/or reports instillation and observations accurately.*
_____	_____	20. Completes instillation within 15 minutes (if applicable).*

TOTAL * POINTS: ____________

TOTAL OTHER POINTS: ____________

FINAL SCORE: ____________

IF SUCCESSFUL GO ON TO THE NEXT PAGE.

NAME: ____ DATE: _________________

/ / Routine Eye Instillation / / Altered Eye Instillation

INSTILLATION OF EYE MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area.
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label of medication with medication card or Kardex.*
_____	_____	5. Assembles any additional appropriate supplies on medication tray.
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Alters task to meet needs of patient (if applicable).*
_____	_____	9. Prepares patient, as needed for eye instillation.
_____	_____	10. Verifies medication at bedside.*
_____	_____	11. Maintains medical asepsis during eye instillation.*
_____	_____	12. Observes patient during eye instillation.*
_____	_____	13. Instills eye medication correctly.*
_____	_____	14. Sequences steps of task for best performance.

NAME: ______________________________ DATE: ______________

☐ Routine Eye Instillation ☐ Altered Eye Instillation

INSTILLATION OF EYE MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	15. Maintains safety factors for patient.*
_____	_____	16. Makes patient comfortable after application.
_____	_____	17. Cleans up after eye instillation.
_____	_____	18 Recognizes limitations in regard to instillation or related tasks (if applicable).*
_____	_____	19. Records and/or reports instillation and observations accurately.*
_____	_____	20. Completes instillation within 15 minutes (if applicable).*

TOTAL * POINTS: ______________

TOTAL OTHER POINTS: ______________

FINAL SCORE: ______________

UPON COMPLETION OF THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.

2. If you passed the test, check the schedule for the module or area of study you are to take next.

3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

MASTER TEST

INSTRUCTIONS

1. Inform your teacher that you are ready for the Master Test and sign up on the appropriate schedule. (You are responsible for being present at the proper location at the right time.)

2. Select a student patient from the list of available classmates and have present for the testing (unless you are to use a mannequin.)

3. This test consists of two (2) parts:
   a. instill ear medication as if for an adult (routine);

   b. instill ear medication as if for a child (routine).

4. A check list for each part of the test is provided in this booklet. Write your name and date on each one and check the appropriate box.

5. When you go to the test area, turn the booklet to page 188 and give it to your teacher.

6. You will draw for the situations you are to perform. When ready to test, you will secure supplies for each. Upon successful completion of one, you will immediately proceed to the second one.

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NAME: ______________________________ DATE: _____________

☐ Adult Instillation ☐ Child Instillation

INSTILLATION OF EAR MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area.
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label of medication (or container) with medication card or Kardex, and places medication on medication tray.*
_____	_____	5. Assembles any additional appropriate supplies on medication tray.
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Prepares patient as needed for ear instillation.
_____	_____	9. Positions patient correctly for instillation.
_____	_____	10. Provides adequate lighting for ear instillation.*
_____	_____	11. Verifies medication at bedside.*
_____	_____	12. Maintains medical asepsis during ear instillation.*

NAME: ______________________________ DATE: _____________

☐ Adult Instillation ☐ Child Instillation

INSTILLATION FOR EAR MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	13. Straightens ear canal correctly for age level of patient.*
_____	_____	14. Instills ear medication correctly.*
_____	_____	15. Provides for proper drainage of ear canal following instillation.*
_____	_____	16. Observes patient throughout ear instillation.
_____	_____	17. Maintains safety factors for patient.*
_____	_____	18. Makes patient comfortable after instillation.
_____	_____	19. Cleans up after ear instillation.
_____	_____	20. Sequences steps of task correctly.
_____	_____	21. Recognizes limitations in regard to instillation.
_____	_____	22. Records and/or reports instillation and observations accurately.*
_____	_____	23. Completes instillation within specified time.*

TOTAL * POINTS: _______________

TOTAL OTHER POINTS: _______________

FINAL SCORE: _______________

IF SUCCESSFUL GO ON TO THE NEXT PAGE.

NAME: ______________________________ DATE: ______________

☐ Adult Instillation ☐ Child Instillation

INSTILLATION OF EAR MEDICATION

MASTER TEST

CHECK LIST

U	S	
		1. Verifies order with doctor's order on Kardex and/or patient's chart.*
		2. Obtains keys for medication area.
		3. Washes hands before proceeding.*
		4. Verifies label of medication (or container) with medication card or Kardex, and places medication on medication tray.*
		5. Assembles any additional appropriate supplies on medication tray.
		6. Identifies patient in correct manner.*
		7. Explains task to patient.
		8. Prepares patient as needed for ear instillation.
		9. Positions patient correctly for instillation.
		10. Provides adequate lighting for ear instillation.*
		11. Verifies medication at bedside.*
		12. Maintains medical asepsis during ear instillation.*

NAME: ______________________________ DATE: ______________

☐ Adult Instillation ☐ Child Instillation

INSTILLATION FOR EAR MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	13. Straightens ear canal correctly for age level of patient.*
_____	_____	14. Instills ear medication correctly.*
_____	_____	15. Provides for proper drainage of ear canal following instillation.*
_____	_____	16. Observes patient throughout ear instillation.
_____	_____	17. Maintains safety factors for patient.*
_____	_____	18. Makes patient comfortable after instillation.
_____	_____	19. Cleans up after ear instillation.
_____	_____	20. Sequences steps of task correctly.
_____	_____	21. Recognizes limitations in regard to instillation.
_____	_____	22. Records and/or reports instillation and observations accurately.*
_____	_____	23. Completes instillation within specified time.*

TOTAL * POINTS: ______________

TOTAL OTHER POINTS: ______________

FINAL SCORE: ______________

IF SUCCESSFUL GO ON TO THE NEXT PAGE.

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.

2. If you passed the test, check the schedule for the module or area of study you are to take next.

3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

MASTER TEST

INSTRUCTIONS

1. Inform your teacher that you are ready for the Master Test and sign up on the appropriate schedule. (You are responsible for being present at the proper location at the right time.)

2. Select a student patient from the list of available classmates and have present for the testing (unless you are to use a mannequin.)

3. This test consists of two (2) parts:
   a. instill nasal medication by medicine dropper (routine);

   b. instill nasal medication by inhaler or atomizer (routine).

4. A check list for each part of the test is provided in this booklet. Write your name and date on each one and check the appropriate box.

5. When you go to the test area, turn the booklet to page 194 and give it to your teacher.

6. You will draw for the situations you are to perform. When ready to test, you will secure supplies for each. Upon successful completion of one, you will immediately proceed to the second one.

NAME: ____ DATE: __________________

☐ Dropper ☐ Inhaler ☐ Atomizer

INSTILLATION OF NASAL MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area (if applicable).
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label on medication card or Kardex, and places medication on medication tray.*
_____	_____	5. Assembles any additional appropriate supplies on medication tray (if applicable).
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Prepares patient, as needed, for nasal instillation.
_____	_____	9. Positions patient correctly for instillation.*
_____	_____	10. Positions patient's head properly for instillation.
_____	_____	11. Verifies medication at bedside.*
_____	_____	12. Maintains medical asepsis during nasal instillation.*
_____	_____	13. Uses proper equipment for nasal medication ordered.*

NAME: ________________________________ DATE: ______________

☐ Dropper ☐ Inhaler ☐ Atomizer

INSTILLATION OF NASAL MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	14. Instills nasal medication correctly.*
_____	_____	15. Provides for proper penetration of nasal medication following instillation.*
_____	_____	16. Observes patient throughout nasal instillation.*
_____	_____	17. Maintains safety factors for patient.*
_____	_____	18. Makes patient comfortable after instillation.
_____	_____	19. Cleans up after nasal instillation.
_____	_____	20. Sequences steps of task correctly.
_____	_____	21. Recognizes limitations in regard to instillation.
_____	_____	22. Records and/or reports instillation and observations accurately.*
_____	_____	23. Completes instillation within time span.*

TOTAL * POINTS: ______________

TOTAL OTHER POINTS: ______________

FINAL SCORE: ______________

IF SUCCESSFUL GO ON TO THE NEXT PAGE.

NAME: ________________________________ DATE: ______________

☐ Dropper ☐ Inhaler ☐ Atomizer

INSTILLATION OF NASAL MEDICATION
MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area (if applicable).
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label on medication card or Kardex, and places medication on medication tray.*
_____	_____	5. Assembles any additional appropriate supplies on medication tray (if applicable).
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Prepares patient, as needed, for nasal instillation.
_____	_____	9. Positions patient correctly for instillation.*
_____	_____	10. Positions patient's head properly for instillation.
_____	_____	11. Verifies medication at bedside.*
_____	_____	12. Maintains medical asepsis during nasal instillation.*
_____	_____	13. Uses proper equipment for nasal medication ordered.*

NAME: ______________________ DATE: ____________

☐ Dropper ☐ Inhaler ☐ Atomizer

INSTILLATION OF NASAL MEDICATION

MASTER TEST

CHECK LIST

U	S	
____	____	14. Instills nasal medication correctly.*
____	____	15. Provides for proper penetration of nasal medication following instillation.*
____	____	16. Observes patient throughout nasal instillation.*
____	____	17. Maintains safety factors for patient.*
____	____	18. Makes patient comfortable after instillation.
____	____	19. Cleans up after nasal instillation.
____	____	20. Sequences steps of task correctly.
____	____	21. Recognizes limitations in regard to instillation.
____	____	22. Records and/or reports instillation and observations accurately.*
____	____	23. Completes instillation within time span.*

TOTAL * POINTS: ____________

TOTAL OTHER POINTS: ____________

FINAL SCORE: ____________

IF SUCCESSFUL GO ON TO THE NEXT PAGE.

UPON COMPLETION OF
THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.

2. If you passed the test, check the schedule for the module or area of study you are to take next.

3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

MASTER TEST

INSTRUCTIONS

1. Sign up on the appropriate schedule for the Master Test.
2. If you are to use a student partner as a patient, select a partner from the list of persons available at the time of your testing. (You are responsible for being present for your testing, with your partner, if indicated, at the proper time and place.)
3. This test consists of two (2) parts:
    a. insert medication vaginally (routine);

    b. insert suppository medication rectally (routine).
4. A check list for each part of the test is provided in this booklet. Write your name and the date on each one.
5. When you go to the test area, turn the booklet to page 200 and give it to your teacher.
6. When you perform the insertions your teacher will have you draw for the situations you are to perform. When ready to test, you will obtain supplies for each. Upon successful completion of one, you will immediately proceed to the second one.

NAME: ______________________________ DATE: ______________

☐ Vaginal Insertion ☐ Rectal Insertion

INSERTION OF VAGINAL OR RECTAL MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area (if applicable).
_____	_____	3. Washes hands before proceeding with medication.*
_____	_____	4. Verifies label of medication wrapper or container with order.*
_____	_____	5. Assembles medication and any appropriate supplies (if applicable).
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Assembles appropriate supplies in patient's unit.
_____	_____	9. Provides privacy for patient.
_____	_____	10. Positions patient properly for task being performed.*
_____	_____	11. Drapes patient correctly for task.
_____	_____	12. Protects linens during task.
_____	_____	13. Verifies medication with order at the bedside.*

NAME: ________________________ DATE: ____________

/___/ Vaginal Insertion

/___/ Rectal Insertion

INSERTION OF VAGINAL OR RECTAL MEDICATION
MASTER TEST

CHECK LIST

U	S	
_____	_____	14. Inserts medication correctly.*
_____	_____	15. Maintains medical asepsis during insertion.*
_____	_____	16. Maintains safety factors for patient during task.*
_____	_____	17. Observes patient during insertion.*
_____	_____	18. Makes patient comfortable following insertion.
_____	_____	19. Cleans patient area after insertion.
_____	_____	20. Recognizes limitations in regard to insertion or related tasks (if applicable).*
_____	_____	21. Sequences steps of task for best use of time and materials.
_____	_____	22. Records and/or reports medication insertion and observations accurately.*
_____	_____	23. Completes insertion of medication wwithin time span.*

TOTAL * POINTS: ____________

TOTAL OTHER POINTS: ____________

FINAL SCORE: ____________

IF SUCCESSFUL GO ON TO THE NEXT PAGE.

NAME: ______________________________ DATE: ______________

_____ Vaginal
/___/ Insertion

_____ Rectal
/___/ Insertion

INSERTION OF VAGINAL OR RECTAL MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area (if applicable).
_____	_____	3. Washes hands before proceeding with medication.*
_____	_____	4. Verifies label of medication wrapper or container with order.*
_____	_____	5. Assembles medication and any appropriate supplies (if applicable).
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Assembles appropriate supplies in patient's unit.
_____	_____	9. Provides privacy for patient.
_____	_____	10. Positions patient properly for task being performed.*
_____	_____	11. Drapes patient correctly for task.
_____	_____	12. Protects linens during task.
_____	_____	13. Verifies medication with order at the bedside.*

NAME: ____________________________ DATE: ______________

☐ Vaginal Insertion

☐ Rectal Insertion

INSERTION OF VAGINAL OR RECTAL MEDICATION

MASTER TEST

CHECK LIST

U	S	
_____	_____	14. Inserts medication correctly.*
_____	_____	15. Maintains medical asepsis during insertion.*
_____	_____	16. Maintains safety factors for patient during task.*
_____	_____	17. Observes patient during insertion.*
_____	_____	18. Makes patient comfortable following insertion.
_____	_____	19. Cleans patient area after insertion.
_____	_____	20. Recognizes limitations in regard to insertion or related tasks (if applicable).*
_____	_____	21. Sequences steps of task for best use of time and materials.
_____	_____	22. Records and/or reports medication insertion and observations accurately.*
_____	_____	23. Completes insertion of medication wwithin time span.*

TOTAL * POINTS: ______________

TOTAL OTHER POINTS: ______________

FINAL SCORE: ______________

IF SUCCESSFUL GO ON TO THE NEXT PAGE.

UPON COMPLETION OF THE MASTER TEST

INSTRUCTIONS

1. After you have taken the "Master Test" for this module, check with your teacher to see if you passed the test.
2. If you passed the test, check the schedule for the module or area of study you are to take next.
3. If you did not pass the test schedule a conference with the teacher to decide what you should do before scheduling a re-test.

CLINICAL EXPERIENCE
MEDICATION PREPARATION

CHECK LIST

U	S	
_____	_____	1. Verify medication order (using method given) with doctor's orders or patient's chart.
_____	_____	2. Adhere to limitations of medications able to prepare.
_____	_____	3. Obtain medication keys (and control book if indicated) and unlock medication area.
_____	_____	4. Wash hands according to proper technique (30 second wash).
_____	_____	5. Select correct container of medication.
_____	_____	6. Verify label for type and dosage of medication.
_____	_____	7. Open container and pour medication correctly for type ordered.
_____	_____	8. Verify (poured) medication with medication order.
_____	_____	9. Close container properly and verify third time.
_____	_____	10. Record narcotics or controlled drugs properly (verify) drug count).*
_____	_____	11. Store medication properly for type.
_____	_____	12. Alter state of medication properly.*

* if applicable

CLINICAL EXPERIENCE

MEDICATION PREPARATION

CHECK LIST

U S

_____ _____ 13. Obtain any additional equipment necessary to administer medication.*

_____ _____ 14. Lock or secure medication area when finished.

_____ _____ 15. Clean up preparation area.

_____ _____ 16. Maintain medical asepsis throughout task.

_____ _____ 17. Sequence steps of medication preparation correctly.

_____ _____ 18. Meet time limit.

* if applicable

* *

(To pass the test on medication preparation you must have all items marked satisfactory on this check list.)

CLINICAL EXPERIENCE
MEDICATION ADMINISTRATION

CHECK LIST

U	S	
		1. Checks to make certain all supplies and equipment are present for administration of medication.
		2. Checks to make certain medication area is locked or secured.
		3. Washes hands according to the proper technique.
		4. Takes medication (by proper method) to correct patient unit.
		5. Identifies patient and verify medication for type, dosage, mode of administration, and time.
		6. Communicates with the patient.
		7. Takes care of any prior needs patient may have (if applicable).
		8. Positions patient to take mdication (if indicated).
		9. Administers medications correctly for mode of administration (assist patient if indicated).
		10. Observes patient before, during, and after administration of medication.
		11. Makes patient comfortable and give call bell after administration of medication.

CLINICAL EXPERIENCE
MEDICATION ADMINISTRATION

CHECK LIST

U S

_____ _____ 12. Returns to medication area and clean properly.

_____ _____ 13. Proceeds correctly if unable to administer medication.

_____ _____ 14. Maintains medical asepsis throughout task.

_____ _____ 15. Records medications and observations correctly.

_____ _____ 16. Sequences steps correctly for administration of medication.

_____ _____ 17. Meets the time limit (if applicable).

_____ _____ 18. Maintains 100% accuracy on check list.

* *

CLINICAL EXPERIENCE

SCHEDULE II & III CONTROLLED DRUGS

CHECK LIST

U	S	
_____	_____	1. Obtain proper equipment for counting medication.
_____	_____	2. Procures qualified assistance for count.
_____	_____	3. Unlocks medication area correctly.
_____	_____	4. Washes hands according to proper technique.
_____	_____	5. Identifies medications correctly for each one counted.
_____	_____	6. Counts medication correctly (according to method used on form of medication).
_____	_____	7. Verifies each medication counted with partner.
_____	_____	8. Re-affirms count.
_____	_____	9. If error: Re-counts medication and give second count.*
_____	_____	10. Checks sign out record for possible errors.*
_____	_____	11. Checks doctor's orders and medication sheets in order to locate error.*
_____	_____	12. Corrects error in proper manner.*
_____	_____	13. Verifies and/or report correct count on written form.
_____	_____	14. Reports to superior if unable to resolve error.*

CLINICAL EXPERIENCE

SCHEDULE II & III CONTROLLED DRUGS

CHECK LIST

U S

_____ _____ 15. Locks facilities and tidy medication area.

_____ _____ 16. Sequences steps of task correctly.

_____ _____ 17. Maintains medical asepsis throughout task.

_____ _____ 18. Meets time limits.*

_____ _____ 19. Maintains 100% accuracy on check list.

* if applicable

CLINICAL EXPERIENCE

INSTILLATION OF EAR MEDICATION

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area.
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label on medication (or container) with medication card or Kardex, and place medication on medication tray.
_____	_____	5. Assembes any additional appropraite supplies on medication tray.
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Prepares patient, as needed for ear instillation.
_____	_____	9. Positions patient correctly for instillation.*
_____	_____	10. Provides adequate lighting for ear instillation.*
_____	_____	11. Verifies medication at bedside.*
_____	_____	12. Maintains medical asepsis during ear instillation.*
_____	_____	13. Straightens ear canal correctly for age level of patient.*
_____	_____	14. Instills ear medication correctly.*
_____	_____	15. Provides for proper drainage of ear canal following instillation.*

CLINICAL EXPERIENCE

INSTILLATION OF EAR MEDICATION

CHECK LIST

U	S	
_____	_____	16. Observes patient throughout ear instillation.*
_____	_____	17. Maintains safety factors for patient.*
_____	_____	18. Makes patient comfortable after instillation.
_____	_____	19. Cleans up after ear instillaion.
_____	_____	20. Sequences steps of task correctly.
_____	_____	21. Recognizes limitations in regard to instillation.*
_____	_____	22. Records and/or reports instillation and observations accurately.
_____	_____	23. Completes instillation within specified time.*

* *

You must maintain 100% accuracy on points marked with an asterisk (*).

CLINICAL EXPERIENCE

INSTILLATION OF EYE MEDICATIONS

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area and unlocks.
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label on medication with medication card or Kardex.*
_____	_____	5. Assembes any additional appropriate supplies on medication tray.
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Alters task to meet needs of patient (if applicable).*
_____	_____	9. Prepares patient, as needed for eye instillation.
_____	_____	10. Verifies medication at bedside.*
_____	_____	11. Maintains medical asepsis during eye instillation.*
_____	_____	12. Observes patient during eye instillation.*
_____	_____	13. Instills eye medication correctly.*

CLINICAL EXPERIENCE

INSTILLATION OF EYE MEDICATION

CHECK LIST

U S

_____ _____ 14. Sequence steps of task for best performance.

_____ _____ 15. Maintains safety factors for patient.*

_____ _____ 16. Makes patient comfortable after application.

_____ _____ 17. Cleans up after eye instillation.

_____ _____ 18. Recognizes limitations in regard to instillation or related tasks (if applicable).*

_____ _____ 19. Records and/or reports instillation and observations accurately.*

_____ _____ 20. Completes instillation within 15 minutes (if applicable).*

* *

* Must maintain 100% accuracy on these points.

CLINICAL EXPERIENCE

INSTILLATION OF NASAL MEDICATION

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area (if applicable).
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label on medication card or Kardex and places medication on medication tray.*
_____	_____	5. Assembles any additional appropriate supplies on medication tray (if applicable).
_____	_____	6. indentifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Prepares patient, as needed, for nasal instillation.
_____	_____	9. Positions patient correctly for instillation.*
_____	_____	10. Positions patient's head properly for instillation.
_____	_____	11. Verifies medication at bedside.*
_____	_____	12. Maintains medical aspesis during nasal instillation.
_____	_____	13. Uses proper equipment for nasal medication ordered.*

CLINICAL EXPERIENCE

INSTILLATION OF NASAL MEDICATION

CHECK LIST

U	S	
_____	_____	14. Instills nasal medication correctly *
_____	_____	15. Provides for proper penetration of nasal medication following instillation.*
_____	_____	16. Observes patient throughout nasal instillation.*
_____	_____	17. Maintains safety factors for patient.*
_____	_____	18. Makes patient comfortable after instillation.
_____	_____	19. Cleans up after nasal instillation.
_____	_____	20. Sequences steps of task correctly.
_____	_____	21. Recognizes limitations in regard to instillation.*
_____	_____	22. Records and/or reports instillation and observations accurately.*
_____	_____	23. Completes instillation within time span.*

* *

Must maintain 100% accuracy on points marked with an asterisk (*).

CLINICAL EXPERIENCE

INSERTION OF VAGINAL OR RECTAL MEDICATION

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for the medication area (if applicable).
_____	_____	3. Washes hands before proceeding with medication.*
_____	_____	4. Verifies label on medication wrapper or container with order.*
_____	_____	5. Assembles medication and any appropriate supplies (if applicable).
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Assembles appropriate supplies in patient's unit.
_____	_____	9. Provides privacy for patient.
_____	_____	10. Position patient properly for task being performed.*
_____	_____	11. Drape patient correctly for task.
_____	_____	12. Protects linens during task.
_____	_____	13. Verifies medication with order at the bedside.*

CLINICAL EXPERIENCE

INSERTION OF VAGINAL OR RECTAL MEDICATION

CHECK LIST

U	S	
_____	_____	14. Inserts medication correctly.*
_____	_____	15. Maintains medical asepsis during insertion.*
_____	_____	16. Maintains safety factors for patient during task.*
_____	_____	17. Observes patient during insertion.*
_____	_____	18. Makes patient comfortable following insertion.
_____	_____	19. Cleans patient area after insertion.
_____	_____	20. Recognizes limitations in regard to insertion or related tasks (if applicable).*
_____	_____	21. Sequences steps of task for best use of time and materials.
_____	_____	22. Records and/or reports medication insertion and observations accurately.*
_____	_____	23. Completes insertion within time span.*

* *

Must Maintain 100% accuracy on all points with asterisk (*).

CLINICAL EXPERIENCE

ROUTINE TOPICAL APPLICATION

CHECK LIST

U	S	
_____	_____	1. Verifies order with doctor's order on Kardex and/or patient's chart.*
_____	_____	2. Obtains keys for medication area and unlocks.
_____	_____	3. Washes hands before proceeding.*
_____	_____	4. Verifies label of medication with medication card or Kardex.*
_____	_____	5. Assembles appropriate supplies and/or equipment for topical application.
_____	_____	6. Identifies patient in correct manner.*
_____	_____	7. Explains task to patient.
_____	_____	8. Verifies medication at bedside.*
_____	_____	9. Prepares patient as needed for topical application.
_____	_____	10. Maintains medical asepsis throughout topical application.*
_____	_____	11. Observes patient before, during and after topical application.
_____	_____	12. Applies topical medication correctly.*

CLINICAL EXPERIENCE

ROUTINE TOPICAL APPLICATION

CHECK LIST

U S

_____ _____ 13. Maintains safety factors for patient during and after tasks.*

_____ _____ 14. Makes patient comfortable after application.

_____ _____ 15. Cleans up patient area after application.

_____ _____ 16. Records and/or reports application accurately with observations.*

_____ _____ 17. Recognizes limitations in regard to application of topical medication.*

_____ _____ 18. Completes application within proper time span.*

* *

* Must maintain 100% accuracy on these points.

MEDICATION AIDE

COURSE VERIFICATION

This is to verify that ______________________ has successfully completed
(student)
40 hours theory, practice and all Master Tests for the Medication Aide Course through ______________________.
(class facility)

Signed: ______________________ Date: ______________
(Primary Teacher)

This is to verify that, in my opinion, ______________________ has
(student)
successfully completed 20 hours practicum experience in the administration of medication at ______________________.
(health facility)

Signed: ______________________ Date: ______________
(observing R.N.)

____
Student's name

____
Student's address city zip

High School Diploma or GED received at: ______________________

______________________ Date: ______________

Three months experience received at: ______________________

____

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